

The Greater Los Angeles County Region (Region) covers an area of over 2,000 square miles and, as home to more than 10 million people, is the most populous county in the United States. The people and resources of this region serve as an economic engine for both the State of California and the rest of the nation. Its climate, beaches, culture and other attractions draw tens of millions of visitors every year to California. Meanwhile, its economic opportunities every year draw tens of thousands of new residents to the Region.

However, the growth, success and importance of the Region have created serious water management issues:

- Imported water from the environmentally strained Sacramento Delta, the over-allocated Colorado River and the sensitive Owens Valley meets roughly ½ of the Region's water needs, either through direct delivery, storage or transfers (Metropolitan Water District of Southern California (MWD) Integrated Resources Plan (IRP), 2003).
- Local groundwater supplies in many places have been compromised by a host of industrial contaminants such as perchlorate, Chromium-6, and Perchloroethylene/Trichloroethylene (PCE/TCE).
- Urban stormwater runoff washes thousands of tons of trash and pollutants into the Region's waterways and on to the Region's world-renowned beaches and environmentally sensitive coastline, resulting in multiple beach closures each year and despoiling the natural environment.
- Development has destroyed over 95% of the Region's wetlands which historically served as important ecosystems for both local habitat and for migratory birds. Meanwhile, channelization of hundreds of miles of the Region's waterways have eliminated most in-stream and riparian habitat.

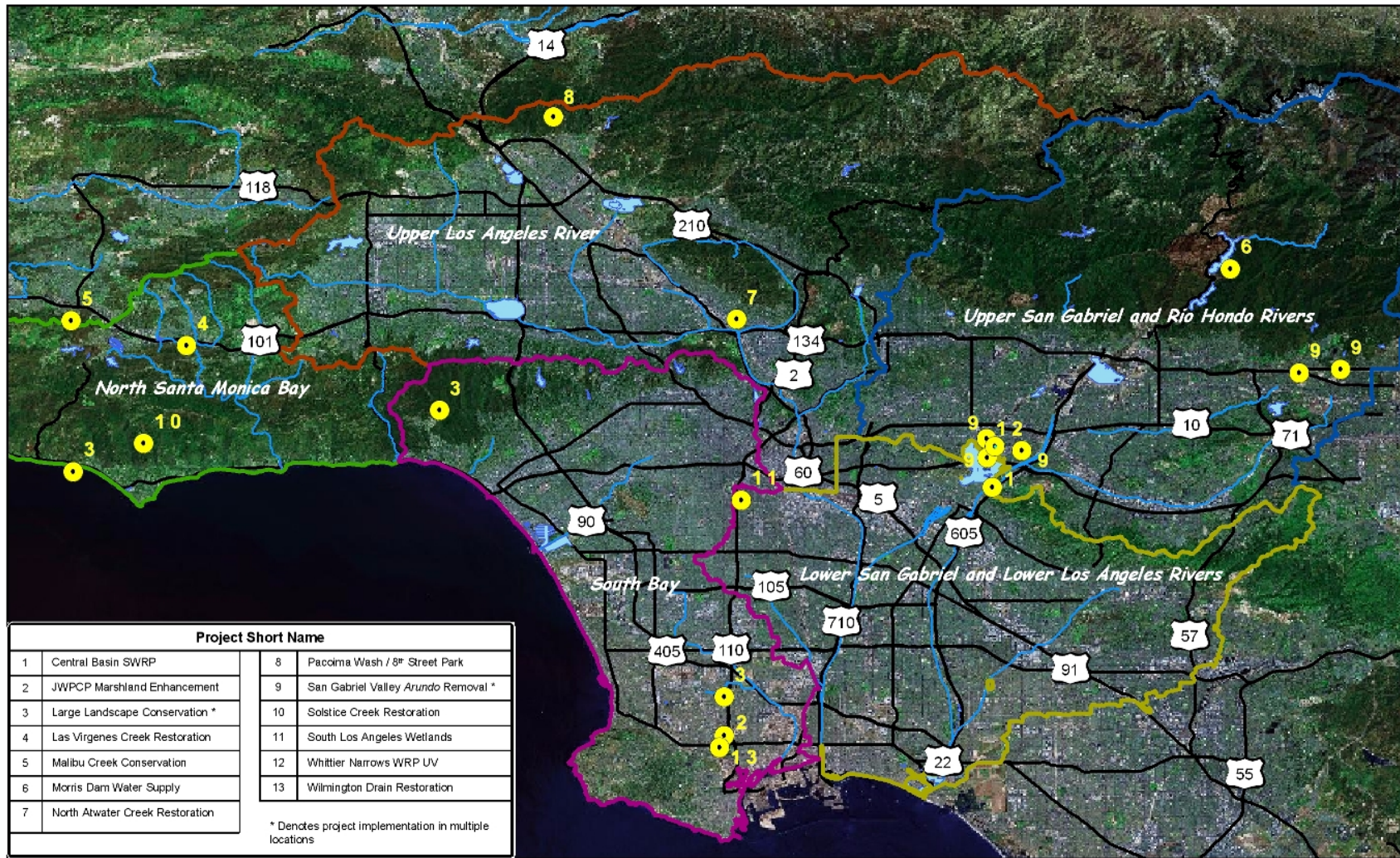
These issues are not new to the Region and the 88 cities, dozens of water and sanitation agencies, and numerous stakeholders have grappled with them for decades. However, with the task at hand now larger than ever and the projected cost for resolving these issues estimated in the tens to hundreds of billions of dollars just for stormwater management alone, these parties are now working together in an unprecedented integrated manner. They have recognized that, in order to be successful, sets of projects need to be developed and implemented in an integrated manner that produces significant water supply, water quality and other benefits.

This Proposal is comprised of a set of thirteen priority projects that will deliver a strong combination of water supply, water quality and other benefits. This set of high priority projects was developed through the Region's Integrated Regional Water Management (IRWM) planning process and, when implemented will:

- Develop new local water supplies, protect existing supplies, and promote water conservation to increase local water supply reliability and reduce dependence on imported water.
- Create wetlands and parks that also capture and treat stormwater runoff.
- Restore riparian habitats in multiple locations.

These 13 projects are described in this Work Plan. **Figure 5-1** illustrates the Region's boundary and the project locations within the Region

The Regional Water Management Group and stakeholders understand that local funding is and will remain central to solving the Region's water management challenges and all parties are taking active steps toward raising billions of dollars through local funding measures and rate adjustments. However, much of these funds will not be available to implement projects for many years. Proposition 50, Chapter 8 State funding is therefore critical in the short-term to fund priority projects that are important first steps towards addressing the water resource and management needs of the Region.



**FIGURE 5-1: PRIORITY PROJECTS LOCATION**  
Greater Los Angeles County Region

*IRWM Step 2 Implementation Grant Proposal  
Proposition 50, Chapter 8*

## Overview of Projects

While each project provides its own merits, the collection of projects will accomplish the following:

- Address multiple water management strategies in an integrated fashion
- Spur further support for the IRWM planning process
- Create projects that demonstrate the value of multi-benefit projects to the community and provide incentive for local entities to pass local funding measures
- Develop water management partnerships for coordinated implementation of regional projects

**Table 5-1** provides an overview of the 13 priority projects identified in Figure 5-1. Project completion status of each project is identified by the design percentage complete as of June 2006. Relevant design documents are discussed in each project Work Plan section and provided in Attachment 8.



## Introduction

Table 5-1 Projects Overview

Project Short Name	Abstract	Design Status	Implementing Agency
1. Central Basin SWRP	Construction of a 12-mile recycled water line from San Jose Creek WRP to distribute up to 16,000 afy of recycled water (13,500 afy for City of Vernon refinery) and complete Central Basin Recycled Water System.	10%	Central Basin Municipal Water District
2. JWPCP Marshland Enhancement	Restoration of vegetation and wildlife habitat value of the 17 acre freshwater JWPCP marshland that provides storm water treatment, flood control; Project includes educational and recreational facilities.	100%	County Sanitation Districts of LA County
3. Large Landscape Conservation	Installation of 1,950 weather-based irrigation controllers at 500 locations in the watershed to achieve up to 2,000 afy in water conservation and 500 afy in runoff reduction; Establish a rebate program (2,700 units); Develop 17 demonstration gardens and a public outreach program	90%	West & Central Basin Municipal Water Districts
4. Las Virgenes Creek Restoration	Reestablish a native creek side habitat to enhance the water quality and biological environment of the area; Reestablish direct connectivity between the two existing riparian communities.	100%	City of Calabasas; Mountains Restoration Trust
5. Malibu Creek Conservation	Promotes indoor and outdoor water conservation by replacing low-efficiency irrigation systems, clothes washers and toilets with more efficient systems.	60%	Las Virgenes Municipal Water District
6. Morris Dam Water Supply	Lower the operational pool behind Morris Dam by upgrading the dam's control structures to allow more storm water to be captured for recharge at downstream spreading grounds.	60%	Los Angeles County Flood Control District
7. North Atwater Creek Restoration	Expands existing park by adding over 5 acres of water quality improvement landscaping	10%	City of LA Bureau of Sanitation
8. Pacoima Wash / 8 <sup>th</sup> Street Park	Convert 3 acres of undeveloped land into a natural park that collects, treats, and infiltrates residential runoff onsite and create recreational, educational, and aesthetic benefits to disadvantage community.	30%	Mountains Recreation and Conservation Authority
9. San Gabriel Valley <i>Arundo</i> Removal	Eradicate 24 net acres of <i>Arundo</i> at 3 riparian areas in the San Gabriel Valley; Project will complete eradication efforts in the valley and prevent <i>Arundo</i> expansion to 120 acres of uninfested areas.	100%	LA/SG Rivers Watershed Council
10. Solstice Creek Restoration	Complete the Solstice Creek Steelhead Habitat Restoration Plan by restoring Solstice Creek to a more natural condition through removal of debris, sediment, invasive species and creek barriers	30%	National Park Service, SMMNRA
11. South Los Angeles Wetlands	Converts a former MTA maintenance facility into a multi-benefit community resource with a water quality treatment element, a constructed wetland, and a community and education center.	10%	City of LA Bureau of Sanitation
12. Whittier Narrows WRP UV	Address NDMA concentrations in tertiary effluent to allow continued groundwater recharge of 7,000 afy (on average) for indirect potable reuse by converting from chloramination to UV disinfection	30%	Sanitation Districts of Los Angeles County
13. Wilmington Drain Restoration	Proposes wetlands restoration in the Dominguez Channel Watershed.	10%	City of LA Bureau of Sanitation



## Proposal Goals and Objectives

Recognizing the tremendous water resource and quality of life needs for the Region, the Regional Water Management Group, referred to as the Leadership Committee in the Draft IRWM Plan, has established nine water management goals for both the IRWM Plan and this Proposal. These goals are:

1. Reduce dependence on imported water
2. Optimize use of local water resources
3. Enhance water supply reliability
4. Improve the quality of urban runoff and stormwater
5. Maintain and enhance flood protection
6. Increase watershed-friendly recreation and accessibility to open space for all communities
7. Conserve and restore native habitat
8. Manage public open spaces to reduce the risk of wildlands fires
9. Promote the application of watershed approaches to resource management issues

**Table 5-2: How Projects Address Proposal and IRWM Plan Goals**

Project	Proposal Goals								
	1	2	3	4	5	6	7	8	9
1. Central Basin SWRP	●	●	●						
2. JWPCP Marshland Enhancement				●			●		●
3. Large Landscape Conservation	●		●	●					●
4. Las Virgenes Creek Restoration					●	●	●		●
5. Malibu Creek Water Conservation	●		●	●					●
6. Morris Dam Water Supply	●	●	●		●				
7. North Atwater Creek Restoration				●	●	●			●
8. Pacoima Wash / 8th Street Park						●			●
9. San Gabriel Valley <i>Arundo</i> Removal					●		●	●	●
10. Solstice Creek Restoration						●	●		●
11. South Los Angeles Wetlands Park				●	●	●	●		●
12. Whittier Narrows WRP UV	●	●	●						
13. Wilmington Drain Restoration				●	●	●			●

To address these goals, the objectives of this Proposal are:

- Achieve the goals above established for the IRWM Plan in a manner consistent with the Plan’s short and long term priorities, identified water management strategies, and implementation strategy
- Address Statewide Priorities and Program Preferences of the State’s IRWM Program
- Serve as demonstration projects to stimulate further integrated planning as well as local funding sources
- Create learning opportunities for cities, water and sanitation agencies and stakeholders as to how best to address water management in the Region

## Consistency with Draft IRWM Plan

In addition to addressing regional goals and objectives as outlined in the Draft IRWM Plan, this Proposal is also consistent with the Draft IRWM Plan as it:

- Fits within the short and long term priorities
- Matches the water management strategies
- Addresses identified gaps
- Is compatible with the implementation strategy

## Short and Long Term Priorities

The short term priorities of the Draft IRWM Plan are:

- Utilize a regional and sub-regional committee structure for development and implementation of the IRWMP
- Complete the Greater Los Angeles County IRWM Plan by January 1, 2007
- Articulate quantifiable planning targets for water supply, water quality, flood management, and open space/ habitat
- Determine which water management strategies can contribute to meeting the identified objectives
- Identify projects that will meet the gap between existing projects and the regional planning targets
- Maximize funding opportunities for project implementation from local, State and Federal sources

All projects included in this Proposal address the last three short-term priorities. In particular:

- All projects are representative of identified water management strategies that have been developed to address the objectives identified in the Draft IRWM Plan
- All projects are a part of a suite of projects designed to meet the Draft IRWM Plan's 20-year planning targets
- Projects are being implemented to serve as demonstration projects that will help to both attract additional outside funding and to help persuade the people of the Region to create additional local funding sources for similar projects

The long-term priorities of the Draft IRWM Plan are:

- Maintain a regional and sub-regional committee structure to oversee plan implementation and assure continued stakeholder input
- Optimize use of recycled water, groundwater, desalination, and stormwater to enhance water supply reliability
- Reduce demand on imported water sources
- Improve surface water quality to meet applicable water quality standards
- Preserve open space, conserve sensitive habitats, and protect special-status species

All projects in the Proposal directly contribute to the last four long-term priorities. At the same time, the implementation and success of these projects will help contribute to the first long-term priority.

## Match Water Management Strategies

The Draft IRWM Plan identifies a role and opportunity for each of the nineteen water management strategies in the Region. Table 5-3 on the following page illustrates how the 13 projects in this Proposal implement 15 of the 19 strategies. In addition, each project implements at least 2 strategies with some implementing as many as 7 strategies.

## Addresses Identified Gaps

The Draft IRWM Plan established a number of quantifiable planning targets for a 20 year time horizon. Gaps between future planning targets and current resource levels are being determined for all of the targets. Implementation of the IRWM Plan is designed to fill these gaps. The planning targets and associated gaps are expressed in terms of:

- Volume of additional water supply that would be created
- Volume of water conservation that would be achieved
- Volume of recycled water that would be utilized
- Volume of dry weather runoff that would be captured and treated
- Amount of aging flood management infrastructure replaced
- Volume of stormwater runoff that would be captured and treated
- Linear miles of riparian habitat that would be restored
- Acres of new watershed-friendly parkland and open space

All projects included in this Proposal have been selected for their ability to offer quantifiable benefits that contribute towards filling at least one of the identified gaps, and many projects offer benefits addressing multiple gaps. With the exception of the target for repair and replacement of flood management infrastructure, which is not an immediate priority, all of the gaps listed above are addressed by at least one project in the Proposal.

## Compatible with the Implementation Strategy

Because of the large size of the region and the difficulty in implementing a large set of projects at a given time due to funding constraints, the initial implementation strategy of the Draft IRWM focuses on prioritizing proposed projects within defined water management programs and then selecting high priority projects to represent each program. The water management programs are summarized below:

- Imported Water Reduction and Supply Reliability
- Urban Runoff and Stormwater Water Quality Improvement
- Flood Protection Maintenance & Improvement
- Watershed-Friendly Recreation and Open Space Creation
- Natural Habitat Conservation and Restoration

An important element of the strategy is to propose an initial set of projects that will best initiate overall Plan implementation by stimulating further integrated planning, creating learning opportunities for stakeholders, and raising public awareness. A particular emphasis is placed on projects that can deliver multiple benefits across two or more programs.



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**Introduction**

The projects in this proposal are consistent with the Draft IRWM implementation strategy. In addition to meeting screening criteria based on readiness-to-proceed, technical feasibility and level of benefits produced, the projects have been selected to be broadly representative of Regional priorities and provide a showcase of high impact projects demonstrating the innovative approaches necessary to reach the Region's objectives.

**Table 5-3 Water Management Strategies Addressed by Proposal**

Project Short Name	Water Management Strategies																		
	Desalination	Ecosystem Restoration	Env. Habitat, Protection & Improvement	Flood Management	Groundwater Mgmt / Conjunctive Use	Imported Water	Land Use Planning	NPS Pollution Control	Recreation and Public Access	Storm Water Capture and Management	Surface Storage	Water and Wastewater Treatment	Water Conservation	Water Quality Protection / Improvement	Water Recycling	Watershed Planning	Water Supply Reliability	Water Transfers	Wetlands Enhancement and Creation
1. Central Basin SWRP															●		●		
2. JWPCP Marshland Enhancement		●	●	●				●	●	●				●					●
3. Large Landscape Conservation								●					●	●		●	●		
4. Las Virgenes Creek Restoration		●	●	●					●					●					
5. Malibu Creek Water Conservation								●					●	●		●	●		
6. Morris Dam Water Supply				●	●												●		
7. North Atwater Creek Restoration		●	●					●	●	●				●		●			●
8. Pacoima Wash / 8th Street Park		●	●					●	●	●				●		●			
9. San Gabriel Valley <i>Arundo</i> Removal		●	●						●				●	●		●			
10. Solstice Creek Restoration		●	●													●			
11. South Los Angeles Wetlands Park		●	●					●	●	●				●		●			●
12. Whittier Narrows WRP UV					●							●		●	●		●		
13. Wilmington Drain Restoration		●	●					●	●	●				●					●

## Linkages and Synergies between Projects

Linkage and interdependence between the priority projects is discussed below. For the purpose of the Draft IRWM Plan, it is assumed that two or more projects are linked or inter-dependent if they verify one or more of the following conditions:

1. A project is a precursor to the other(s), or a project is a component of a larger project
2. Projects are part of one integrated action plan developed to resolve a local or regional issue
3. Project(s) have a potential impact on regional policy
4. Projects are physically linked (e.g., tertiary treatment plant and recycled water distribution system)
5. Synergies exist between projects implementation strategies (e.g., public outreach efforts can be combined, experience with specific measurement methods can be shared, regulatory agencies can be approached at once with similar issues)

Based on this definition, this Proposal contains a number of linkages, interdependencies and synergies both among the 13 priority projects and with other larger programs or other projects.

- **Wilmington Drain Water Quality Improvement Synergies:** Joint Water Pollution Control Plant (JWPCP) Marshland Enhancement Project (#2) and the Wilmington Drain Restoration Multiuse Project (#13) are located along the Wilmington Drain which carries a number of different pollutants which eventually enters Machado Lake. Both projects contribute to water quality improvements in this impaired water body.
- **Linkage Between Local and Regional Conservation Programs:** Large Landscape Water Conservation, Runoff Reduction and Educational Program (#3) is a component of a larger project and part of several integrated action plans (West Basin Municipal Water District (WBMWD) and Central Basin Municipal Water District (CBMWD) Urban Water Management Plan, MWD Five-Year Conservation Strategy Plan). The implementation of this project and lessons learned will lead to the implementation of similar projects at the local and potentially regional level. This project is closely linked to the Malibu Creek Watershed Urban Water Conservation and Runoff Reduction Project since they both rely on a similar technology of weather-based irrigation controllers, which will lead to shared lessons learned and potential partnerships in expanding or advertising the program.
- **Las Virgenes Creek Restoration Project (#4):** This project is a component of a larger project and part of two integrated action plans (Calabasas Creek Master Plan and Las Virgenes Gateway Master Plan) developed to resolve a local or regional issue. The project will also have regional impact on policy for urban stream restoration in the Santa Monica Mountains and, potentially, the Region as a whole as tremendous regional interest is now focused on how to restore channelized creeks and rivers to a more natural State.
- **Stormwater Implementation and Education Synergies:** North Atwater Creek Restoration Project (#7), the Pacoima Wash Greenway Project (#8) and other restoration projects relying on stormwater best management practices (BMPs) will benefit from a number of synergies such as public outreach elements, performance measurement tools, and lessons learned that could later be applied to similar projects throughout the Region.
- **Components of Larger Habitat Restoration Projects:** San Gabriel Valley Riparian Habitat *Arundo* Removal Project (#9) is a component of a larger project: it is a continuation of a campaign to eradicate all *Arundo* from urban riparian areas of San Gabriel Valley. In addition, the project is linked to the Morris Dam Water Supply Enhancement Project (#6) as it will contribute to increasing the stream capacity downstream of the dam facilitating the safe release of additional water for recharge at downstream spreading grounds. Solstice Creek Steelhead Habitat Restoration Project (#10) is the last key component of a larger project aiming at enhancing habitat for federally endangered southern steelhead trout.



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**Introduction**

In addition to these important linkages between the 13 priority projects in the Proposal, the projects included in this proposal are also linked to potentially other integrated, and potentially more valuable future regional projects. For example, lesson learned from the Large Landscape Water Conservation Project (#3) effort will support a programmatic approach at the regional level to implement similar projects. Hence, the 13 initial priority projects are critical to stimulate further integrated planning, create learning opportunities for cities, water and sanitation agencies and stakeholders as to how to best address water management in the Region, and initiate the overall program implementation.

## Status of Work Items

This section identifies the status of work items for each project. For the Application, three status conditions are considered:

1. Work item complete as of application submittal date (June 28, 2006)
2. Work item is not complete as of application submittal date but will be complete by May 1, 2007
3. Work item will be completed after May 1, 2007

May 1, 2007 is the assumed date of grant contract signature and all tasks completed after this date will be included as work items in the grant contract. **Table 5-4** summarizes the status of the key work items based on the three status conditions. The specific activities that will be performed to implement each project in the Proposal are further described for each project.

**Table 5-4: Status of Critical Project Pre-Construction Work Items**

Project Short Name	Land / ROW Acquisition	Planning	Design / Engineering	Environmental Documentation	Permit Acquisition
1. Central Basin SWRP	Jan 07	Oct 06	Dec 06	Complete	Dec 06
2. JWPCP Marshland Enhancement	Complete	Complete	Complete	Complete	Complete
3. Large Landscape Conservation	Complete	Complete	Complete	Complete	Complete
4. Las Virgenes Creek Restoration	Complete	Complete	Complete	Complete	Complete
5. Malibu Creek Water Conservation	Complete	Complete	Nov 06	Complete	Complete
6. Morris Dam Water Supply	Complete	Complete	Jan 07	Mar 07	May 07
7. North Atwater Creek Restoration	Complete	Complete	Apr 07	Apr 07	Apr 07
8. Pacoima Wash / 8th Street Park	Complete	Complete	Oct 06	Complete	Sep 06
9. San Gabriel Valley Arundo Removal	Complete	Apr 07	Complete	Complete	Complete
10. Solstice Creek Restoration	Complete	Complete	Oct 07	Complete	Complete
11. South Los Angeles Wetlands Park	Dec 06	Complete	Apr 07	Nov 06	Feb 07
12. Whittier Narrows WRP UV	Complete	Complete	Dec 06	Oct 06	Nov 06
13. Wilmington Drain Restoration	Complete	Complete	Apr 07	Apr 07	Apr 07

Footnotes:

■	Pre-construction work item complete as of June 28, 2006
■	Pre-construction work item will be complete by May 1, 2007
■	Pre-construction work item will be complete after May 1, 2007

Each project scope of work is divided into seven primary tasks that mimic the Budget categories:

- a. Direct Project Administration Costs
- b. Land Purchase Easement
- c. Planning / Design / Engineering / Environmental Documentation
- d. Construction / Implementation
- e. Environmental Compliance / Mitigation / Enhancement
- f. Construction Administration
- g. Other Costs

The status of each task for the proposal is discussed in the following seven sections. Following these sections, descriptions of all work items that will be complete by May 1, 2007 are discussed by project.

### (a) Direct Project Administration Costs

Project administration will occur throughout project implementation and specific tasks are detailed for each project. This task includes quarterly progress report to demonstrate progress of project implementation or construction.

### (b) Land Purchase / Easement

All projects except two (Central Basin SWRP and South Los Angeles Wetlands Park) have completed land or easement acquisition efforts. The first project will acquire pipeline alignment easement during summer 2006 and the second project is currently in negotiations, which are expected to be complete by August 2006.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

All project planning activities, including study preparation and stakeholder outreach, are scheduled to be completed by May 1, 2007.

#### *Design / Engineering*

Current levels of design and planned design completion dates for each project are summarized in Table 5-1 and Table 5-4, respectively. All projects except one will have design completed by May 1, 2007 and four have already completed their design. One project (Solstice Creek Restoration Project) will complete design in October 2007 and will immediately commence implementation.

#### *Environmental Documentation*

All projects will complete their environmental documentation requirements by May 1, 2007. In fact, eight projects have completed their documentation. The five projects that have not completed environmental documentation have, at a minimum, completed an Initial Study (IS) Environmental Checklist Form. These checklists indicate that none of these five projects will create significant impacts.

#### *Permit Acquisition*

All projects will have permits secured by May 1, 2007. Currently, six projects have acquired all required permits.



### (d) Construction / Implementation

All projects will start construction / implementation prior to December 1, 2007. In fact, all but one project will commence construction or bid solicitation upon grant contract execution on May 1, 2007.

### (e) Environmental Compliance / Mitigation / Enhancement

All projects will perform environmental compliance / mitigation / enhancement, as required and described in environmental documentation. The 5 projects that must complete environmental documentation do not expect potentially significant impacts or significant impacts with mitigation based on an IS Environmental Checklist Form.

### (f) Construction Administration

Construction administration will occur for construction projects beginning a few months prior to the start of construction and ending upon the construction Notice of Completion. Specific tasks are detailed for each project in the applicable project attachments.

### (g) Other Costs

All projects will complete a Project Assessment and Evaluation Plan (PAEP) upon notification of grant award, which is expected in November 2006, and will complete each PAEP by February 2007. Also, all projects will complete a Monitoring Plan (MP) and Quality Assurance Project Plan (QAPP), as necessary. Finally, all projects will complete a Labor Compliance Plan (LCP) in accordance with grant requirements. Each projects' plan submittals are discussed in detail in each project attachment.

## Project Work Plans

The following sections include detailed information for each project and lay out the project Work Plan. Each project contains three primary sections:

- Detailed Project Description
- Work Items through May 1, 2007
- Work Items to Complete after May 1, 2007

The first section includes project need, project description, and project map(s). The second section identifies work items that are complete as of application submittal or will be completed prior to May 1, 2007. Also, work item submittals are included after each task, if applicable.

The third section identifies work items that will be completed after May 1, 2007 by task. Also, work item submittals are included after each task, if applicable. Finally, there is a discussion of standards and merits along with a description of coordination with other agencies.

# 1. Central Basin Southeast Water Recycling Project

## Detailed Project Description

### Project Need

The Central Basin Southeast Water Recycling Project (SWRP) will construct over 12 miles of distribution pipeline for up to 20,000 afy of recycled water delivery and will connect the recycled water distribution network loop to provide reliability throughout the network. Recycled water is a very reliable source of water supply, reduces the need for imported water, reduces discharge into the rivers and ocean, and is a drought-proof supply.

### Project Description

CBMWD currently reclaims, recycles and distributes approximately 4,000 acre-feet per year (afy) throughout its region via the Central Basin Water Recycling System that extends from southeast Los Angeles County south to Bellflower and northwest up to the City of Vernon, with approximately 65 miles of recycled water pipeline in use.

As part of the ongoing development of the Central Basin Water Recycling System, CBMWD is proposing to construct the SWRP, which consists of 12 miles of new recycled water pipeline and a new or upgraded existing pump station to provide increased pumping capacity. The new pipeline is a connection of the recycled water system from the City of Pico Rivera to the City of Vernon that will create a pipe network loop.

The SWRP will continue to use wastewater from San Jose Creek WRP and treat it to Title 22 standards (tertiary) to distribute it through a newly constructed pipeline to various users in the cities of Pico Rivera, Montebello, East Los Angeles, portions of Los Angeles County, and Vernon. The project will ultimately serve approximately 100 public and private sites along the main stretch of pipeline, as well as the lateral lines that will eventually be constructed. Approximately 20,000 acre-feet (af) of recycled water will be distributed to customers in these cities, thereby decreasing the need for that amount of imported water from the State Water Project and the Colorado River. This project consists of constructing approximately 60,300 linear feet (12.1 miles) of a 42-inch diameter recycled water transmission pipeline throughout the aforementioned cities. In addition, this project will construct a new or upgraded existing pump station to work in conjunction with the existing CBMWD Rio Hondo Pump Station which is located in the City of Pico Rivera.

Connecting (looping) the existing recycled water system will increase flow and pressure in many areas of the distribution system that are not adequately served today. In addition, the project will provide recycled water to new customers in several cities. This project will provide complete hydraulic connectivity at the terminating ends of the existing recycled water system, thus allowing the CBMWD to more efficiently and reliably serve its customers and perform routine maintenance and operations. The expansion of the distribution system will encourage customers that use imported water for non-potable purposes, such as landscape irrigation, commercial, and industrial use, to use recycled water.

This project is identified in the CBMWD Water Recycling Master Plan that was completed in August 2000 and the adopted 2005 Urban Water Management Plan. This project is part of the ongoing, successful CBMWD Water Recycling Program. Within the Master Plan, the SWRP project identifies over 100 users of the recycled water by construction of this backbone pipeline.



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## 1. Central Basin Southeast Water Reliability Project

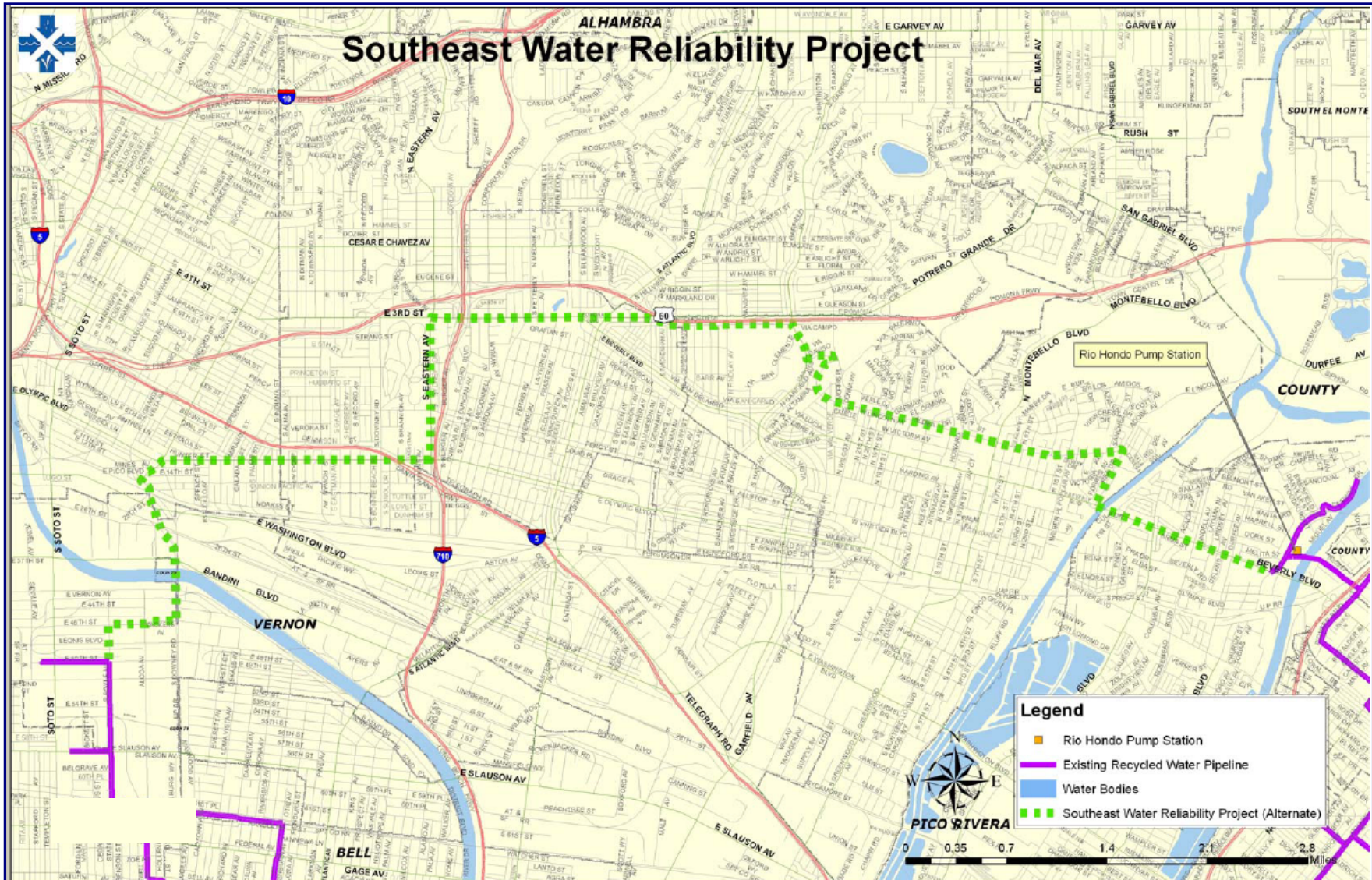
The updated Recycled Water Master Plan for CBMWD is scheduled to be completed by August 2006, and the SWRP will be a major expansion by completing a major loop of the CBMWD Recycled Water Distribution System. The updated Master Plan will identify potential customers along the pipeline to use the recycled water and determine what laterals lines will need to be built off of the main backbone pipeline.

### Project Map

The project location and facilities are identified in **Figure 5-2**, which shows the pipeline alignment through the various cities. The potential customer sites to receive the recycled water will be determined while the pipeline is being constructed with the exception of the refinery being built in the City of Vernon. This customer will be using approximately 13,500 af of recycled water per year. The proposed pipeline is the backbone pipeline that will have laterals constructed off of it to allow for customer connections. This proposed pipeline connects to the existing recycled water pipeline within the CBMWD service area, allowing the system to be “looped”, therefore increasing flow and pressure in many areas. **Figure 5-3** shows the disadvantaged communities benefiting from and surrounding the project. **Figure 5-4** shows the entire CBMWD service area, including the existing recycled water pipelines, proposed SWRP pipelines, and existing facilities.

1. Central Basin Southeast Water Reliability Project

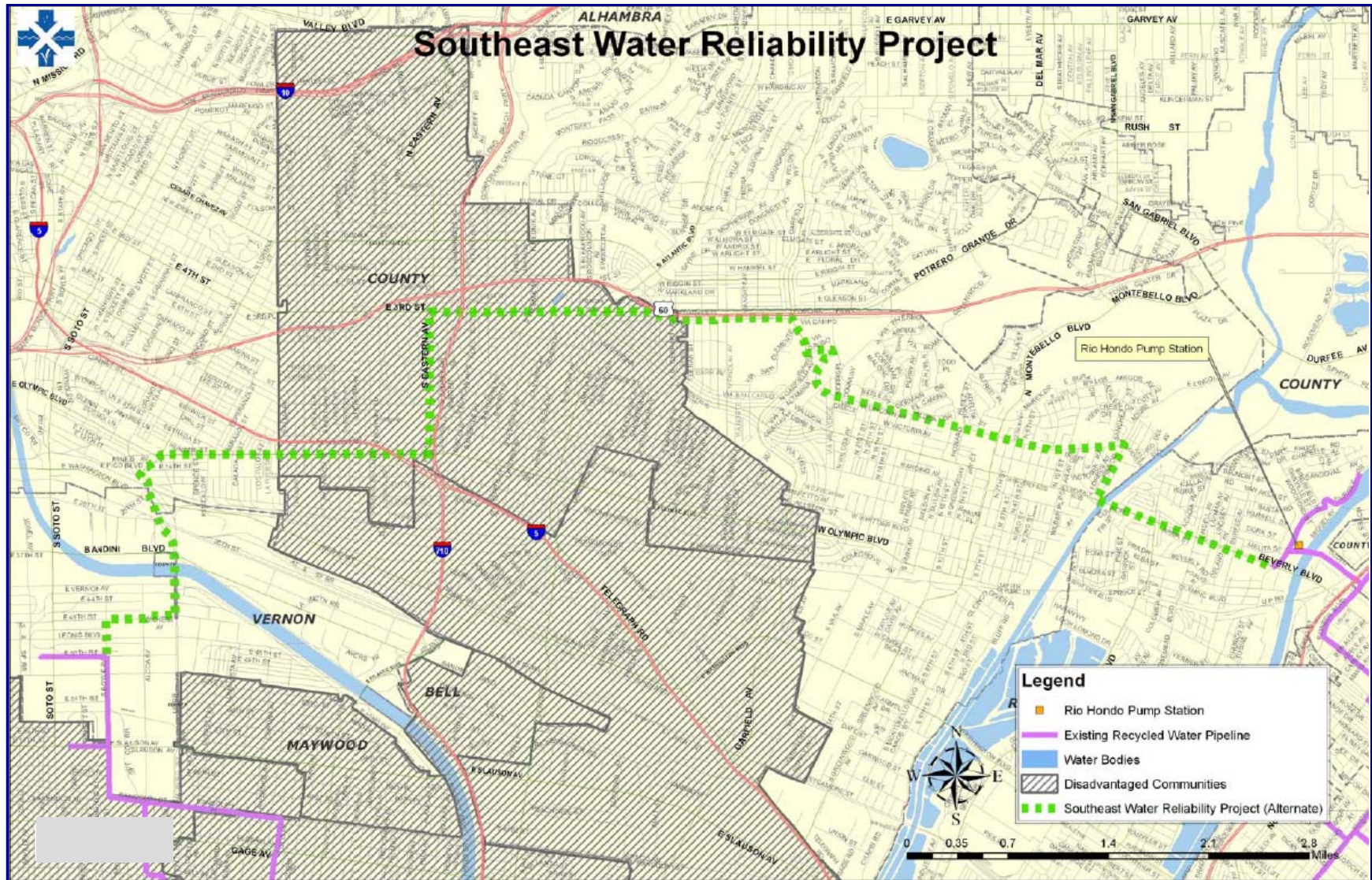
Figure 5-2: Central Basin SWRP Location and Facilities





1. Central Basin Southeast Water Reliability Project

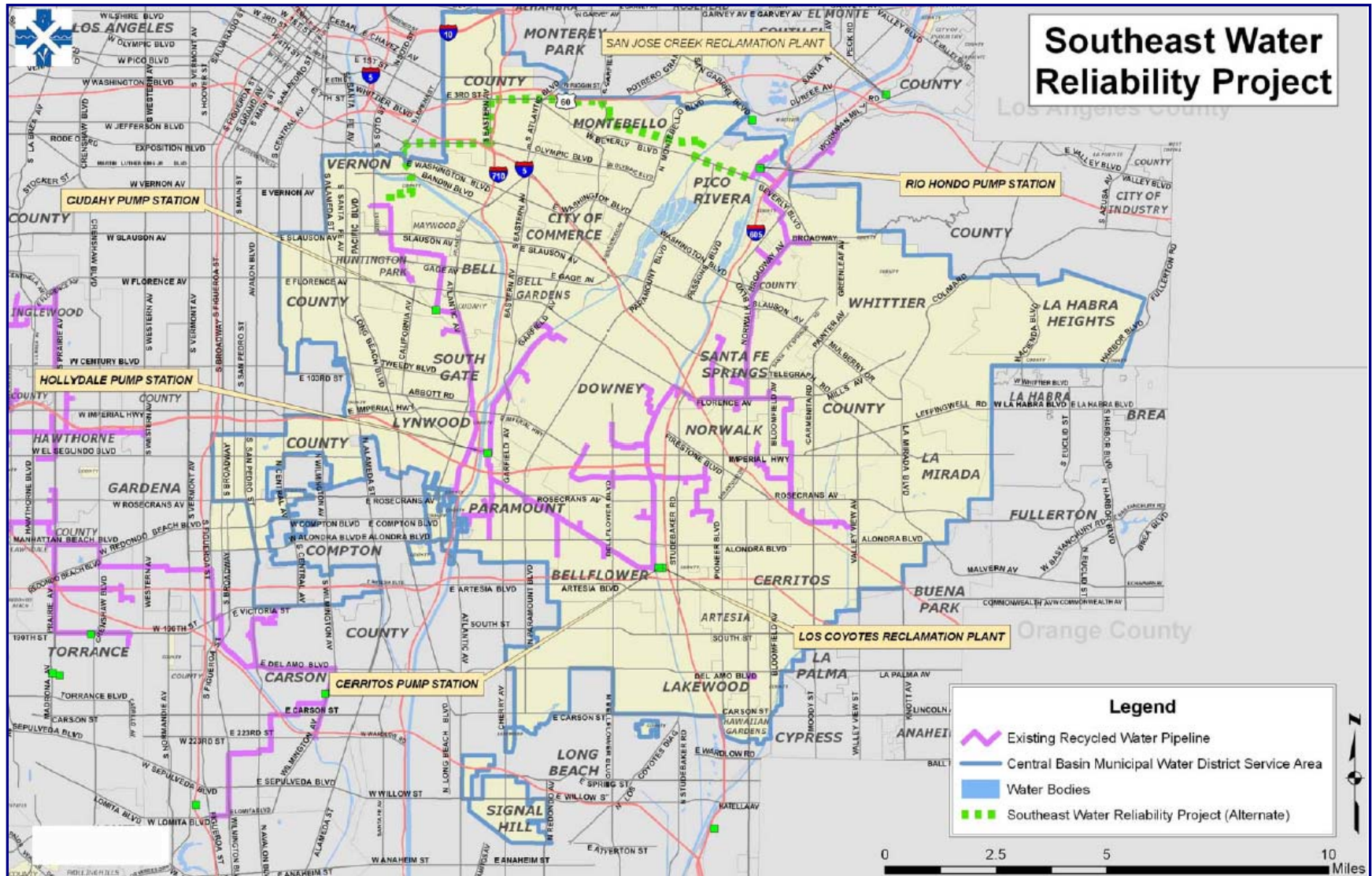
Figure 5-3: Central Basin SWRP Disadvantaged Communities





1. Central Basin Southeast Water Reliability Project

Figure 5-4: Central Basin Service Area



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**1. Central Basin Southeast Water Reliability Project**

## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

The CBMWD project manager oversees all activities associated with design and construction of the Project. The project manager reviews all technical data, schedules, contractual, and financial information pertaining to the Project. Also, the project manager coordinates with various agencies regarding permitting, environmental, design and construction issues. The CBMWD staff engineer assists the project manager with technical research and review, as well as providing any technical support for the Project.

### (b) Land Purchase / Easement

To minimize the easement and land acquisition effort, the majority of pipeline construction will be maintained in the public right-of-ways. However, a small section of the pipeline will traverse through various transportation corridors (freeways, railroads, and a bridge) and a Los Angeles County Flood Control Channel. The crossings are listed below in the Permits section.

Easement acquisitions and right-of-ways will be required for construction of the pipeline through transportation corridors and the flood channel. The design consulting firm will coordinate and submit technical data to the relevant transportation agencies for establishing permanent and temporary construction easements.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

CBMWD has hired an outreach consulting firm to implement outreach programs in communities directly impacted by the project construction. CBMWD has already conducted meetings with all municipalities and agencies with jurisdictions in the Project area. The project has also been presented at CBMWD Board Meetings, as well as City Council Meetings within the Project area. The Project information is also posted on the CBMWD official website ([www.centralbasin.org](http://www.centralbasin.org)). Another public workshop will be held in September 2006 during the completion of the 100% design but prior to construction.

The Montebello Loop Pipeline Alignment Study (Draft Preliminary Design Report) (see Attachment 8, Reference 1-3), completed in 2003, illustrates the various alignment alternatives for the proposed project.

An update of the 2000 Recycled Water Master Plan (see Attachment 8, Reference 1-1) will be completed in August 2006.

## 1. Central Basin Southeast Water Reliability Project

Planning Submittals	
Montebello Loop Pipeline Alignment Study	May 2003
Recycled Water Master Plan	Aug 2006
Public Workshop Attendance Sheet	Oct-Dec 2006

*Design / Engineering*

In January 2006, CBMWD awarded a consulting firm (HDR) a contract (see Appendix 5-1) to prepare both the preliminary design report and final design. The Preliminary Design is complete and the 30% design will be completed by September 2006 and the final design will be complete by December 2006. Submittal dates for each stage of design are identified in the table following the discussion. The design consists of the following subtasks:

**30% Design** includes pipeline plans, pump station plans, traffic control plans, surveying, geotechnical report, draft copy of specifications, permitting packages, and a cost estimate. Pipeline plans will include plan and profile sheets to detail existing utilities, proposed pipeline layout, and surveying data. Pump station plans will include pipeline, mechanical and electrical layouts and details. Traffic control plans will be prepared for geotechnical and construction purposes in areas indicated in encroachment permits. The geotechnical report shall include boring data for soil conditions along pipeline alignment within street right-of-way and pipeline tunneling construction at freeway, railroad, and flood channel crossing. The geotechnical report shall also include recommendations for imitating poor soil conditions. Permitting packages will include design plans, exhibits, and forms required for review. The cost estimate is based on 30% pipeline and pump station design plans.

**60% Design** addresses comments from 30% Design submittal with detailed pipeline and pump station design plans, along with traffic control plans as required. Also, the cost estimates reflect the detailed submittal. Refinements will include comprehensive pipeline design with specified details and construction notes based on 30% plan check comments. Also, the pump station plans will include comprehensive piping, structural, mechanical, and electrical details. Traffic control plans will include any comments from agencies overseeing encroachment permits. A comprehensive copy of the specifications will include front end documents, technical specifications and details, and Special Provisions. The detailed cost estimate will include all materials with quantities and cost unit.

**90% Design** will include complete design packages for pipeline construction and pump station and permitting.

**Final Design** and construction documents shall include approved design and specification packages with signatures for construction. Also, all permits will be obtained ready for contractors to process.

Design Submittals	
Preliminary (10%) Design Report & Cost Estimate	May 2006
30% Drawings, Specifications, and Cost Estimate	Sep 2006
60% Drawings, Specifications, and Cost Estimate	Oct 2006
90% Drawings, Specifications, and Cost Estimate	Nov 2006
100% Drawings, Specifications, and Cost Estimate	Dec 2006



## 1. Central Basin Southeast Water Reliability Project

*Environmental Documentation*

The project requires compliance with the California Environmental Quality Act (CEQA) as part of the environmental review process. There is a long history of the SWRP, which was first identified in 1991 (discussed below). An IS and Mitigated Negative Declaration (MND) were completed in 1991 for the Century Reclamation Program. In 1993, an addendum to the IS and MND was performed for the Rio Hondo Water Reclamation Program. In 1998, an addendum to the Negative Declaration for the Century Reclamation Program and the Rio Hondo Water Reclamation Program was completed. CBMWD completed an updated IS and MND in April 2005 (Appendix 5-1). The SWRP project has been included in all of these documents as a way to complete the recycled water system for the region to provide hydrologic connectivity, increase flow and pressure, and allow a more efficient distribution process.

Environmental Documentation Submittals	
Initial Study (Updated)	Apr 2005
Mitigated Negative Declaration (Updated)	Apr 2005

*Permit Acquisition*

The project has a number of permits required for the project implementation. These permits will be acquired in concurrence with the project design.

Permitting Submittals	Purpose	Approval Date	Status
Encroachment permits for Cities of Pico Rivera, Montebello, Vernon, Los Angeles	Open-cut pipeline construction	Dec 2006	Under process
CalTrans Encroachment permit	Trenchless (tunneling) pipeline construction	Dec 2006	Under process
Encroachment permit from Railroads		Dec 2006	Under process
Encroachment permit from LACFCD		Dec 2006	Under process

Encroachment permits from Cities mentioned above are expected to be approved by December 2006 before Notice to Proceed for construction of the Project.

Encroachment permits from California Department of Transportation (CalTrans) are expected to be approved by December 2006 for trenchless pipeline construction across InterState 710 Freeway and InterState 5 Freeway.

Encroachment permits from two railroad companies are expected to be approved by December 2006 for trenchless (tunneling) pipeline construction across two railroad systems.

An encroachment permit from Los Angeles County Flood Control District (LACFCD) is expected to be approved by December 2006 for trenchless (tunneling) pipeline construction across the Rio Hondo River.

**(d) Construction / Implementation**

A General Contractor will be selected and presented to the CBMWD Board of Directors for award. Upon award of contract to the successful bidder, a Notice to Proceed will be issued to commence work.

Construction Submittals	
Notice to Proceed	Apr 2007

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**1. Central Basin Southeast Water Reliability Project****(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed prior to the Notice to Proceed in April 2007. A Labor Compliance Plan will be prepared prior to the Notice to Proceed in April 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Apr 2007
Labor Compliance Plan	Apr 2007

## 1. Central Basin Southeast Water Reliability Project

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

The CBMWD project manager oversees all activities associated with design and construction of the Project. The project manager reviews all technical data, schedules, contractual, and financial information pertaining to the Project. Also, the project manager coordinates with various agencies regarding permitting, environmental, design and construction issues. The CBMWD staff engineer assists the project manager with technical research and review, as well as providing any technical support for the Project.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly, starting July 2007

### (d) Construction / Implementation

A General Contractor will be selected and presented to the Board of Directors for award. Upon award of contract to the successful bidder, a Notice to Proceed will be issued to commence work.

Upon completion of construction, the project will be inspected by CBMWD and other agencies involved for compliance and approval. Based on the successful inspection, the Notice of Completion will be issued and retention of payment will be released.

The consultant hired for construction management services will provide a Final Construction Summary Report, which will include all relevant permits, log of major construction activities, approved change orders, requests for information (RFI), Operational and Maintenance manuals, warranties, and correspondence and notes of major design and construction revisions.

Construction Submittals	
Notice to Proceed	Apr 2007
Notice of Completion	Mar 2008
Final Construction Summary Report	Apr 2008

### (e) Environmental Compliance / Mitigation / Enhancement

Environmental compliance, mitigation, & enhancement activities are not necessary for this project based on environmental documentation discussed above in the Environmental Documentation section.

### (f) Construction Administration

The CBMWD project manager oversees all activities associated with construction of the Project. CBMWD will hire a consulting firm for construction management services to serve as the representative at the construction site, coordinate with contractors, review schedules and invoices, and provide

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## 1. Central Basin Southeast Water Reliability Project

inspection services to ensure construction is in compliance with CBMWD Standards and other governing Standards. Construction administration includes the following tasks:

CBMWD Project Manager will:

- Oversee all activities associated with the construction of the project
- Oversee review of all technical data, schedules, invoices, change order items, contractual, and financial information for approval
- Attend construction meetings to provide technical support and coordinate with various agencies regarding permitting, environmental, design and construction issues

The consulting firm that is hired for construction management services will:

- Serve as the District's representative at the construction site
- Coordinate with contractors and agencies
- Review schedules, change orders and invoices
- Provide inspection services to ensure construction is in compliance with District and governing standards
- Review technical information
- Provide clarifications to Request of Information (RFI)
- Provide recommendations to the District's project manager on any technical and construction issues

The consulting firm hired for the construction management services will also provide various construction services such as review of technical information, change orders, schedules, and invoices; provide clarifications to RFIs; coordinate with contractors and agencies; and provide recommendations to the CBMWD project manager on any technical and construction issues. The construction manager will also prepare record drawings and revise construction documents to reflect any changes in the field. The project manager will oversee review of all technical data, schedules, invoices, change order items, contractual, and financial information for approval. Also, the project manager will attend construction meetings to provide technical support and coordinate with various agencies regarding permitting, environmental, design and construction issues. The CBMWD staff engineer will assist the project manager with technical research and review, as well as provide any technical support for the Project.

## Discussion of Standards and Merits

CBMWD hired a consulting firm to update the 2000 Recycled Water Master Plan (Attachment 8, Reference 1-1) by July 2006 to assess existing and potential recycled water customers in this region. Based on demand and flow data indicated in the master plan, the project facilities will be sized and designed using a hydraulic modeling program (H2ONET). The master plan will identify potential recycled water customers, who will need lateral pipelines constructed off of the main 42" backbone pipeline. The project facilities will be designed and constructed per CBMWD Standards which refer to the latest versions of water industry based specifications such as AWWA, Green Book, etc., as well as local and State regulatory agencies, such as the State and County Department of Health Services (DHS) and RWQCB.

## Coordination with Regional Agencies and State

CBMWD and the City of Vernon have agreed upon a Memorandum of Understanding (MOU) (see Appendix 5-1) to define terms and conditions for supplying defined quantity of recycled water for the proposed Power Plant. The other entities that will use the recycled water will be identified later and will have an agreement with CBMWD to use the recycled water.

## 2. JWPCP Marshland Enhancement Project

### Detailed Project Description

#### Project Need

The Joint Water Pollution Control Plant (JWPCP) Marshland Enhancement Project will restore and enhance 17 acres of wetlands in an urban area. The marshland will support open water, wetland, riparian, scrub, and upland habitats in addition to providing contaminant removal, flood protection, use of recycled materials, a storm water control swale, and education and recreation opportunities.

#### Project Description

This project will enhance and maintain the vegetation and wildlife habitat value of the 17-acre freshwater marshland, referred to as the JWPCP Marshland; located in the northwest corner of the Sanitation Districts of Los Angeles County (LACSD) property in Carson, California. The JWPCP is part of a larger system of wastewater treatment and reclamation plants operated by LACSD, called the Joint Outfall System (JOS). The JWPCP marshland is an isolated remnant of a formerly extensive, natural freshwater wetland complex known as Bixby Slough, resulting from the construction of the Wilmington Drain in the mid-1970s to provide flood protection to a 14-square mile drainage area of Bixby Slough. However, a pump and gravity flow system was installed from Wilmington Drain to provide water to the JWPCP marshland. The pump facility is maintained by the Los Angeles County Department of Public Works (LACDPW), while maintenance of the marshland area itself is the responsibility of LACSD.

The project is being performed as a mitigation measure for upgrades to the JWPCP to reach full secondary treatment as documented in the Joint Outfall System (JOS) 2010 Master Facility Plan Environmental Impact Report (EIR) (Attachment 8, Reference 2-1). The process to enhance the marshland started with the preparation of the Marshland Management Plan (MMP) (Attachment 8, Reference 2-2). The four goals identified in the MMP were:

- Hydrology - sustain the hydrologic conditions necessary to maintain and enhance the freshwater marsh and riparian forest habitats in the marshland.
- Vegetation - maintain vegetation health and enhance the diversity, quality, and amount of native vegetation habitats in the marshland.
- Wildlife - maintain and enhance wildlife habitat values in the marshland.
- Public Use - Continue to control public access to the marshland and maintain and enhance its aesthetic quality and functions.

The MMP was a conceptual plan. In 2004, LACSD hired a consultant, WRA, Inc. (WRA), to develop a project that could be constructed to satisfy the goals of the MMP. The WRA contract scope includes the preparation of preliminary designs, plans and specifications for bidding out the job, and for preparing various reports along the way (hydrologic study, biological review, monitoring plan, final project report). The public use goal was enlarged to include an education and viewing area as part of the project.

WRA prepared several preliminary plans for LACSD and a conceptual design was selected for the site. The conceptual design emphasizes a centralized hydraulic flow pathway, thereby reaching more of the marshland and providing for more wetlands and riparian areas than were present originally. It also



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## 2. JWPCP Marshland Enhancement Project

introduced ponds, meadowlands, and uplands that were not present originally. An education and viewing area was included to the north of the marshland on a formerly unused land area.

While WRA prepared the final plans and specifications, a small bid package to clear non-native vegetation from the site was prepared. Native vegetation that would not support the new hydrologic design was included in these removal plans. The actual work to remove non-natives and some natives was completed in early 2006.

The plans and specifications for all of the remaining work, including grading, revegetation, and construction of the education and viewing area, were completed in March 2006. The bid package was advertised on April 13 and 20, 2006 and bids were received May 23, 2006. The project was awarded to the successful bidder on June 14, 2006.

LACSD anticipate that, in addition to the main goal of restoring and enhancing 17 acres of marshland in an urban setting, other benefits of the project will include:

1. The introduction of education and recreation opportunities at the marshland;
2. Removal of constituents from dry weather runoff in Wilmington Drain (the source of water for the marshland);
3. Flood protection;
4. Aquifer replenishment;
5. Demonstration of the use of recycled products; and
6. Use of a vegetated swale for storm water control.

Currently, the marshland is not open to the public. However, with the addition of an education and viewing area with educational placards and three viewing sites, local school children, club members, and residents will be able to enjoy the site.

Wilmington Drain is a 303 (d)-listed waterway, requiring total maximum daily loads (TMDL) for ammonia, copper, lead, and coliform. Other constituents that may be found in the drain water include arsenic, cadmium, chromium, nickel, selenium, zinc, biological oxygen demand (BOD), total nitrogen, total phosphorus, suspended solids, and volatile organic compounds. The natural marshland processes will help remove these constituents, with an expected removal rate of 20 percent for compounds detected above their detection limit.

An additional 8.8 af of water storage planned for the marshland due to the addition of ponds will contribute to the flood protection of downstream facilities, including the JWPCP. Infiltration and aquifer recharge can occur in the marshland because of its soft bottom, as opposed to the concrete-lined Wilmington Drain. Recycled materials will be used to construct the pavilions, boardwalks, benches, and trash receptacles that will be placed in the education and viewing area. Finally, a vegetated swale will be constructed in the parking lot for the education and viewing area to demonstrate its use to control storm water runoff.

Locally, the site will benefit visitors to the site, which are expected to include school children, club members from bird watching groups, and local residents. By helping to remove constituents from the Wilmington Drain, visitors to the downstream Machado Lake will also benefit from the marshland. Regionally, this marshland is important because of how much of the local wetlands have been lost to development and degradation.

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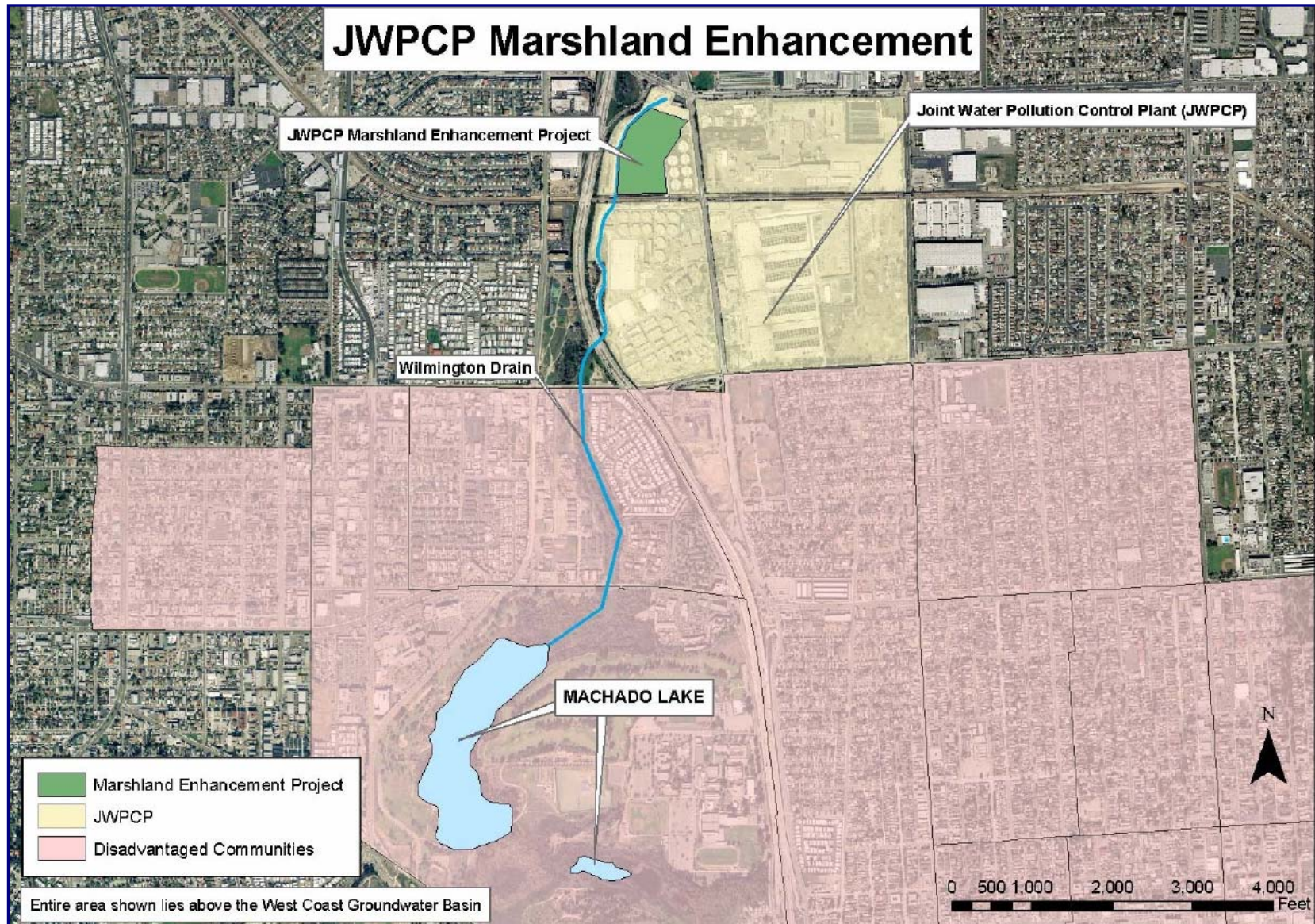
## 2. JWPCP Marshland Enhancement Project

This project and the Wilmington Drain project are connected since they both impact the Wilmington Drain. Geographically, the JWPCP Marshland Enhancement Project is upstream of the Wilmington Drain project. The JWPCP Marshland Enhancement Project, in addition to its primary goal of enhancing the habitats of the marshland, will also remove contaminants from the Wilmington Drain flow, particularly during dry weather. The Wilmington Drain project is designed to help remove contaminants from the drainage flow just before it empties into Machado Lake in the County of Los Angeles' Harbor Park. Together, these and other projects will help the water of Wilmington Drain to meet the required TMDL for ammonia, copper, lead, and coliform.

### Project Map

The project location and facilities are identified on **Figure 5-5**. This figure shows that the JWPCP marshland is located in the West Coast Groundwater Basin. The disadvantaged communities to the south of the project site are also shown, as is Machado Lake at Los Angeles County's Harbor Regional Park. Both are located downstream of the JWPCP marshland and will benefit from the project. The JWPCP Marshland Enhancement project site is located east of both the Harbor Freeway (I-110) and the Wilmington Drain, south of Sepulveda Boulevard, west of the JWPCP Digesters 17 through 23 and Figueroa Street, and north of the Atchison Topeka & Santa Fe railroad tracks and additional JWPCP facilities.

Figure 5-5: JWPCP Marshland Project Location and Facilities





## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

LACSD staff, including managerial, engineering, field, and clerical personnel, will perform project administration activities. These activities include the following tasks:

- Meet with LACSD consultant, WRA (ongoing)
- Review project submittals (ongoing)
- Develop a contract agenda item for the CBMWD's Board of Directors (completed)
- Provide for advertisement of the contract (completed)
- Distribute bid invitations and issue instructions to potential bidders (completed)
- Conduct site job walk (completed)
- Evaluate bids and select the lowest cost responsible and qualified bidder (in progress)
- Check that bonding requirements have been met (summer 2006)
- Let contracts and obtain procurement of services (summer 2006)
- Give Notice to Proceed after all requirements have been met (summer 2006)
- Administer and track project finances (ongoing)
- Control project records and document distribution (ongoing)
- Handle basic administration, planning, meetings, actions, and recordkeeping (ongoing)
- Identify project stakeholders and their various roles and needs (ongoing)
- Manage risk assessment plan (ongoing)

### (b) Land Purchase / Easement

No costs were budgeted for this line item because, in 1965, LACSD purchased the land where the marshland resides.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

Stakeholder outreach has accompanied the project planning. For the past three years, presentations have been made and suggestions solicited from the JWPCP Citizen's Advisory Committee (CAC). This group meets quarterly, and presentations have been made at least once a year to update the Citizen's Advisory Committee (CAC) on the project's progress. Recently, the project was presented to the Dominguez

## 2. JWPCP Marshland Enhancement Project

Channel/Los Angeles Harbor Drainage Watershed Permittee group as an outreach measure. LACSD plans to continue providing regular updates to the CAC and to continue outreach efforts with local groups and cities.

Planning efforts have included the performance of several studies pertinent to the project. They are (see Attachment 8, References 2-3, 2-4, & 2-5):

- Hydrological Analysis and Evaluation of the Pump Station and Outlet Weir for the JWPCP Marshland Enhancement Project (Attachment 8, Reference 2-5)
- Significant Native and Non-Native Vegetation Present Within the JWPCP Marshland (Attachment 8, Reference 2-3)
- Wildlife Habitat Assessment - JWPCP Marshland Enhancement Project (Attachment 8, Reference 2-4)

Project Planning Submittals	
Hydrological Analysis and Evaluation of the Pump Station and Outlet Weir for the JWPCP Marshland Enhancement Project	Jul 2004
Significant Native and Non-Native Vegetation Present Within the JWPCP Marshland	Mar 2004
Wildlife Habitat Assessment—JWPCP Marshland Enhancement Project	Aug 2005

*Design / Engineering*

The Final (100%) Design for the JWPCP Marshland Enhancement Project was completed in March 2006 (see Appendix 5-2). Previously, a Preliminary (30%) Design, 50% Design, and 90% Design were completed. Final design and construction documents were completed as part of the Final Design effort and consist of the design package that will be advertised for project award for construction. WRA prepared the preliminary and final designs, including the final plans and LACSD prepared the final specifications with technical assistance from WRA. All engineering, such as calculations for the bridges and their footings, were performed by Noble, a subcontractor of WRA. WRA and LACSD also prepared the final cost estimate at this time.

Design Submittals	
Marshland Final construction documents	Dec 2005
Education and Viewing Area Final construction documents	Mar 2006

*Environmental Documentation*

The project requires compliance with CEQA as part of the environmental review process. The CEQA requirement was fulfilled with a Negative Declaration. The Draft Negative Declaration was released on May 20, 2005, and comments were received through July 1, 2005. The Final Negative Declaration was approved on July 27, 2005, by the LACSD Board of Directors (see Appendix 5-2).

Environmental Documentation Submittals	
Negative Declaration	Jul 2005

*Permits*

The project has a number of permits required for the project implementation. These permits have been acquired in concurrence with the project design. The California Department of Fish and Game (CDFG)

## 2. JWPCP Marshland Enhancement Project

Streambed Alteration Agreement requires that a Storm Water Pollution Prevention Plan be prepared and followed during the project. Survival requirements, by species, are 80% for the first year and 100% thereafter. The riparian and emergent wetlands are required to attain a 75% cover after 3 years and 90% cover after 5 years. Reports on plant survival and vegetative cover must be submitted to the CDFG yearly for 5 years. Prior to construction or site preparation activities, nesting bird surveys must be performed between March 1 and September 1. Activities within the wetted portion of a stream must be limited to the period of May 1 to October 15, and may be conducted when the stream is not actively flowing outside of these dates. See Appendix 5-2 for the permits.

Permitting Submittals	Purpose	Approval Date
USACE 404 Permit	Filling in waters of the U.S.	Nov 2005
CDFG Streambed Alteration Agreement	Altering streambed flow pathway	Nov 2005
RWQCB 401 Water Quality Certification	Potential impacts to waters of the U.S.	Nov 2005

**(d) Construction / Implementation**

Construction will be performed by a general contractor that will be selected during a low-bid process. The work will be done under two contracts. The first contract has been awarded and included clearing and grubbing. The second contract will be done in three phases to best suit the project. Phase I will include mobilization, site preparation, earthwork, water control structures, utilities, spray irrigation system, and erosion control & hydro-seeding. Phase II will include mobilization, installation of emergent marsh and seasonal wetland plants and a second round of hydro-seeding. Phase III will consist of all remaining tasks, including mobilization, the rest of the irrigation system, trees & shrubs, habitat structures, vehicular and pedestrian paving surfaces, boardwalks & bridges, pedestrian access control, site furnishings & signs, educational displays, and shade pavilions. Phases I, II, and III will be performed in summer-fall 2006, winter 2007, and summer-fall 2007, respectively. The tasks that have been defined include the following:

- Clearing and Grubbing: Non-native brush was removed. Non-native trees and native trees that would not support the new site hydrology were cut down and removed. California tule, a native wetlands plant, was protected in place and not disturbed.
- Mobilization: Mobilization includes moving the required equipment and materials on to the site in preparation of the work scope.
- Site Preparation: Since the trees were originally just cut down, this task includes the removal of all tree root balls and any other trash and facility removal.
- Earthwork: Earthwork includes stripping and stockpiling various types of topsoil, all required excavation and grading, hauling excess material off site, preparing the various subgrades, placing the three types of topsoil (upland, wetland, and meadow), and installing drainage structures.
- Water Control Structures: This includes replacing the outlet slide gate and installing a trash rack.
- Utilities: The one task under this subheading is the electrical connection for the irrigation controller.
- Irrigation System: Two types of irrigation systems, drip and spray, will be installed to ensure that all new vegetation gets established. An automatic controller will also be installed.
- Erosion Control & Hydro-seeding: Erosion control, consisting of silt fences and hydro-seeding will be done to ensure that the soil does not get washed away by rain after the earthwork is completed but before the native vegetation is installed. Hydro-seeding is also being done to establish the meadowlands.
- Trees & Shrubs: Trees, shrubs, and ground cover will be installed as part of this subtask. Approximately 600 trees of various sizes will be planted throughout the marshland and education and viewing area.



## 2. JWPCP Marshland Enhancement Project

Nearly 1,400 shrubs will be planted. Approximately 800 containers of ground cover will be planted in the project area.

- Emergent Marsh Plants: Various size containers of emergent marsh plants will be put in place. The total number of plants to be put in place is nearly 13,000.
- Seasonal Wetland Plants: Seasonal wetland plants will also be planted. This subtask involves planting over 7,000 seasonal wetland plants.
- Habitat Structures: Habitat structures consisting of 4 bat boxes and 1 kestrel nesting platform will be put in place as part of this subtask.
- Vehicular Paving Surfaces: Road base will be compacted for the areas of the driveway and parking. Resin pavement will be placed over the roadbase. Curbs, edge restraints, car stops, and handicapped parking signs and paint will be added.
- Pedestrian Paving Surfaces: Resin pavement will be placed at the entrance, the main path, the teaching area, and wildlife viewing areas No. 1, 2, and 3.
- Boardwalks & Bridges: Bridges, including footings and handrails, will be installed for access to wildlife viewing areas No. 1 and 2. Boardwalks to wildlife viewing areas No. 1, 2, and 3 will be installed.
- Pedestrian Access Control: Pedestrian access control consisting of wood rail fence, wood bollards with chain, and black wrought-iron fencing will be installed.
- Site Furnishings & Signs: Benches, trash receptacles, and pedestrian and vehicular access control signs will be installed.
- Educational Displays: Three educational displays regarding marshland plants and wildlife, and recycling, will be put in place.
- Shade Pavilions: Two shade pavilions, one at the educational area and one at wildlife viewing area No. 1 will be constructed.

Construction Submittals	
Notice to Proceed	Jul 2006

### (e) Environmental Compliance / Mitigation / Enhancement

Environmental compliance consisted of preparation of a Negative Declaration was approved by the LACSD Board of Directors on July 27, 2005. Only two comments were received during the comment period, and responses were provided in the final Negative Declaration. No mitigation was required since the project itself was a mitigation measure and because replacement ratios of 2:1 or greater had been specified for both habitat and vegetative impacts that would occur during the project period.

Construction management activities include both engineering oversight and the presence of an on site inspector during the majority, if not all, of the field work. Engineering oversight will be provided by LACSD. A LACSD inspector will be on site or available at all times. WRA personnel will also be on call to perform specialized inspections, such as inspecting vegetative materials. Construction administration/management activities, which will begin in the summer of 2006, include the following:

- Manage pre-construction meeting
- Check qualifications of construction management team
- Evaluate qualifications of special inspection where applicable
- Establish construction milestones and evaluate liquidated damages

## 2. JWPCP Marshland Enhancement Project

- Define the project scope of work and distinguish out of scope work
- Issue addendums to contract documents
- Review contractor badge and security system
- Work with contractor for acceptance of baseline construction schedule
- Process requests for information (RFIs)
- Check that work is performed according to contract documents
- Check that equipment is supplied according to approved submittals
- Track work tasks and deliverables on the project's critical path
- Interpret information from project management software tools
- Perform or review progress updates and reports
- Issue changes in work as appropriate
- Document change orders with justification and forward for legal review
- Track work completion for payments
- Track extra work claims and credit
- Keep track of work performed on "time and materials" basis
- Identify any ongoing operational constraints
- Keep track of plant security issues
- Keep track of construction mitigation issues
- Keep track of health and safety issues
- Verify and intermediate, mechanical, and contract completion milestones

WRA will prepare a final report summarizing the project activities and field construction operations. This final report will also include a pictorial summary of the progress of the project from the first site inspections to completion following all construction. The final report will be prepared by January 2008.

### (g) Other Costs

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

LACSD staff, including managerial, engineering, field, and clerical personnel, will perform project administration activities. These activities include the following tasks:

- Meet with LACSD consultant, WRA (ongoing)
- Review project submittals (ongoing)
- Administer and track project finances (ongoing)
- Maintain contract escrow bid documents (summer 2006 through fall 2007)
- Control project records and document distribution (ongoing)
- Handle basic administration, planning, meetings, actions, and recordkeeping (ongoing)
- Identify project stakeholders and their various roles and needs (ongoing)
- Ensure and maintain proper labor practices and wage rates (summer 2006 through fall 2007)
- Administer project quality control plan (summer 2006 through fall 2007)
- Manage risk assessment plan (ongoing)

#### Project Administration Submittals

Quarterly Progress Reports	Quarterly
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### (d) Construction / Implementation

Construction will be performed by a general contractor that will be selected during a low-bid process. The work will be done under two contracts, the first of which included clearing and grubbing. The second part will be done in three phases to best suit the project. Phase I will include mobilization, site preparation, earthwork, water control structures, utilities, spray irrigation system, and erosion control & hydro-seeding. Phase II will include mobilization, installation of emergent marsh and seasonal wetland plants and a second round of hydro-seeding. Phase III will consist of all remaining tasks, including mobilization, the rest of the irrigation system, trees & shrubs, habitat structures, vehicular and pedestrian paving surfaces, boardwalks & bridges, pedestrian access control, site furnishings & signs, educational displays, and shade pavilions. Phases I, II, and III will be performed in summer-fall 2006, winter 2007, and summer-fall 2007, respectively. The tasks that have been defined include the following:

- Clearing and Grubbing: Non-native brush was removed. Non-native trees and native trees that would not support the new site hydrology were cut down and removed. California tule, a native wetlands plant, was protected in place and not disturbed.
- Mobilization: Mobilization includes moving the required equipment and materials on to the site in preparation of the work scope.

2. JWPCP Marshland Enhancement Project

- Site Preparation: Since the trees were originally just cut down, this task includes the removal of all tree root balls and any other trash and facility removal.
- Earthwork: Earthwork includes stripping and stockpiling various types of topsoil, all required excavation and grading, hauling excess material off site, preparing the various subgrades, placing the three types of topsoil (upland, wetland, and meadow), and installing drainage structures.
- Water Control Structures: This includes replacing the outlet slide gate and installing a trash rack.
- Utilities: The one task under this subheading is the electrical connection for the irrigation controller.
- Irrigation System: Two types of irrigation systems, drip and spray, will be installed to ensure that all new vegetation gets established. An automatic controller will also be installed.
- Erosion Control & Hydro-seeding: Erosion control, consisting of silt fences and hydro-seeding will be done to ensure that the soil does not get washed away by rain after the earthwork is completed but before the native vegetation is installed. Hydro-seeding is also being done to establish the meadowlands.
- Trees & Shrubs: Trees, shrubs, and ground cover will be installed as part of this subtask. Approximately 600 trees of various sizes will be planted throughout the marshland and education and viewing area. Nearly 1,400 shrubs will be planted. Approximately 800 containers of ground cover will be planted in the project area.
- Emergent Marsh Plants: Various size containers of emergent marsh plants will be put in place. The total number of plants to be put in place is nearly 13,000.
- Seasonal Wetland Plants: Seasonal wetland plants will also be planted. This subtask involves planting over 7,000 seasonal wetland plants.
- Habitat Structures: Habitat structures consisting of 4 bat boxes and 1 kestrel nesting platform will be put in place as part of this subtask.
- Vehicular Paving Surfaces: Road base will be compacted for the areas of the driveway and parking. Resin pavement will be placed over the roadbase. Curbs, edge restraints, car stops, and handicapped parking signs and paint will be added.
- Pedestrian Paving Surfaces: Resin pavement will be placed at the entrance, the main path, the teaching area, and wildlife viewing areas No. 1, 2, and 3.
- Boardwalks & Bridges: Bridges, including footings and handrails, will be installed for access to wildlife viewing areas No. 1 and 2. Boardwalks to wildlife viewing areas No. 1, 2, and 3 will be installed.
- Pedestrian Access Control: Pedestrian access control consisting of wood rail fence, wood bollards with chain, and black wrought-iron fencing will be installed.
- Site Furnishings & Signs: Benches, trash receptacles, and pedestrian and vehicular access control signs will be installed.
- Educational Displays: Three educational displays regarding marshland plants and wildlife, and recycling, will be put in place.
- Shade Pavilions: Two shade pavilions, one at the educational area and one at wildlife viewing area No. 1 will be constructed.

Construction Submittals	
Notice to Proceed	Jul 2006
Notice of Completion	Nov 2007
Final Construction Summary Report	Jan 2008

### (e) Environmental Compliance / Mitigation / Enhancement

Environmental compliance consisted of preparation of a Negative Declaration was approved by the LACSD Board of Directors on July 27, 2005 (Appendix 5-1). Only two comments were received during the comment period, and responses were provided in the final Negative Declaration. No mitigation was required since the project itself was a mitigation measure and because replacement ratios of 2:1 or greater had been specified for both habitat and vegetative impacts that would occur during the project.

LACSD did commit to several mitigation measures in the IS (Appendix 5-1) for CEQA. Nesting bird surveys will be performed prior to construction and ensure that a qualified biologist is on site during critical parts of the construction. Best management practices will be used to minimize storm water runoff from the site during the project. A construction traffic management plan will be coordinated with the responsible agencies, and project-related traffic will be limited to off-peak commute hours.

### (f) Construction Administration

Construction management activities include both engineering oversight and the presence of an on site inspector during the majority, if not all, of the field work. Engineering oversight will be provided by LACSD. A LACSD inspector will be on site or available at all times. WRA personnel will also be on call to perform specialized inspections, such as inspecting vegetative materials. Construction administration/management activities, which will begin in the summer of 2006, include the following:

- Manage pre-construction meeting
- Check qualifications of construction management team
- Evaluate qualifications of special inspection where applicable
- Establish construction milestones and evaluate liquidated damages
- Define the project scope of work and distinguish out of scope work
- Issue addendums to contract documents
- Review contractor badge and security system
- Work with contractor for acceptance of baseline construction schedule
- Process requests for information (RFIs)
- Check that work is performed according to contract documents
- Check that equipment is supplied according to approved submittals
- Track work tasks and deliverables on the project's critical path
- Interpret information from project management software tools
- Perform or review progress updates and reports
- Issue changes in work as appropriate
- Document change orders with justification and forward for legal review
- Track work completion for payments
- Track extra work claims and credit
- Keep track of work performed on "time and materials" basis
- Identify any ongoing operational constraints
- Keep track of plant security issues
- Keep track of construction mitigation issues

## 2. JWPCP Marshland Enhancement Project

- Keep track of health and safety issues
- Verify and intermediate, mechanical, and contract completion milestones

WRA will prepare a final report summarizing the project activities and field construction operations. This final report will also include a pictorial summary of the progress of the project from the first site inspections to completion following all construction. The final report will be prepared by January 2008.

Construction Administration Submittals	
Quarterly Construction Reports	Quarterly
Final Report	Jan 2008

Note: Submittal dates will be determined by Contractor schedule due following award of contract.

## Discussion of Standards and Merits

### *Standards*

The special provisions provided to the contractor are supplemented by the Standard Specifications for Public Works Construction (SSPWC), 2003 Edition, and the Amendments to SSPWC, 2003 Edition, by LACSD. All work must also comply with Federal and State regulations, permits from agencies, latest edition of the County of Los Angeles Uniform Building Laws, the County of Los Angeles Fire Code, the California Division of Industrial Safety Regulations (Title 8), and the rules and regulations of the South Coast Air Quality Management District (SCAQMD). Health and safety regulations that must be complied with include the Codes of Safe Work Practices as required by Title 8 CCR 1509, Hazardous Materials Communications Program (HazCom) as required by Title 8 CCR 5194, and Injury and Illness Prevention Program (IIPP) as required by Title 8 CCR 1509. Soils shall be classified in accordance with the Unified Soil Classification System. ASTM testing methods shall be used as specified in the special provisions. EPA methods for drinking water analysis have been specified for all water sampling.

### *Merits*

AutoCAD version 2005 was used to calculate all excavation and fill amount required by specifying the final grade. AutoCAD is one of the leading programs used for such calculations in the construction industry.

All vegetation that will be placed into the marshland as part of this project will consist of native materials to support native wildlife. The vegetation shall be inspected before installation to ensure that it is healthy and has a good chance for survival. All paving will be made using a resin material, which does not require the use of any quarried materials. Recycled materials are being used for the boardwalks, benches, and trash receptacles. Eucalyptus logs were salvaged from the eucalyptus trees removed for use in constructing the shade pavilions.

## Coordination with Regional Agencies and State

There is an agreement, dated 1975, between LACFCD and LACSD that provides for the construction and maintenance of the pump station by LACFCD and maintenance of the marshland by LACSD. It should be noted, however, that LACDPW now administers the contract, because LACDPW is the successor agency to the branch of the LACFCD department that signed the original agreement.



### 3. Large Landscape Water Conservation, Runoff Reduction and Educational Program

## Detailed Project Description

### Project Need

The Large Landscape Water Conservation, Runoff Reduction and Educational Program will create positive benefits for the watershed including conserving potable water supplies, reducing runoff, and educating the public about wise use of the limited water supply. Use of weather-based irrigation controllers will reduce the amount of runoff that contributes to pollutant loading in the creeks and rivers and thereby reducing the amount that flows to the ocean.

### Project Description

This project will evaluate and implement a large landscape water management program utilizing centralized weather-based irrigation controllers and computer management system that link back to the local and water regional agencies regarding end-use water management. The program is designed to allow the local users (parks, schools, cities, etc.) to work with a water management company, Hydroearth, that utilizes the HydroEarth Water Management System. Participants will be provided with centralized irrigation controllers and management tools to aid in the protection of the local watershed. HydroEarth is an environmentally minded company that provides multi-faceted solutions to conserve water and protect the environment.

The program will also provide an accountability documentation trail that will show water reduction and urban runoff data. The project will include large landscapes and other areas that contribute to high water usage and runoff pollution. The targeted landscape sites will include large landscapes, schools, parks, home owner associations, business parks, facility landscapes, street medians, and residential sites over 1,500 square feet that are the top water users in the area.

The primary objectives of this project are to increase water supply reliability, improve water quality, conduct public educational workshops and develop water efficient demonstration gardens to increase public awareness. By developing this integrated approach, the various stakeholders will work together to meet the objectives of the project.

The project will have several components. The first component of the project is to target large landscape sites of 1 acre and greater. Centralized irrigation controllers will be provided with the goal of conserving 1 afy of water for each acre of land and to reduce urban runoff as a result. Through the installation and management of landscape weather-based irrigation controllers, an estimated 20 to 50 percent of irrigation water will be conserved, thus reducing imported water needs. Also, up to 70 percent of water runoff will be reduced at the targeted areas by using proven scientific irrigation methods. There is also an Area of Special Biological Significance (ASBS) within this Region that the project will positively impact.

The second component of the Project is to target the top residential water users in the region. A total of 2,700 rebates will be provided to residential customers to help customers purchase and install “smarter” residential controllers. Each irrigation controller can range from \$300 to \$700. Most of the residential weather-based irrigation controllers use built-in or on-site weather data.

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### 3. Large Landscape Conservation, Runoff Reduction and Educational Outreach Program

The third component of the Project will be to develop and provide the residential landscape workshops for the residents and business owners. WBMWD has formed a partnership with the Surfrider Foundation to develop and offer "Ocean Friendly Garden" workshops. The Surfrider Foundation is an environmental organization dedicated to restoring and protecting coastal and marine ecosystems. The workshops will be multi-faceted and provide information on various subjects including: weather-based irrigation controllers (rebates), native plants, garden designs, irrigation system "tune-ups" and also provide information on the State's water supply and water quality issues. In addition to the workshops, there will be 17 "Ocean Friendly" demonstration gardens throughout the watershed for those areas along the Santa Monica Bay within WBMWD's service area. Through the workshops, participants will learn about the gardens, which will encourage participants to develop their own "Ocean Friendly Garden." The gardens will provide "real-life" examples of the plants and irrigation systems that will be taught in the workshops. The workshops will provide a unique mechanism necessary to disseminate information regarding the program and to increase public awareness about the water supply and water quality issues. The workshops will help gain public acceptance of the program to help ensure its success.

The last component of the project will be to conduct 61 landscape and native species workshops for those areas located within Central Basin service area. These landscape workshops will be developed and conducted by CBMWD, in coordination with the cities and local stakeholders, to teach people about planting native species and ways to conserve water outdoors.

This project is identified in both the WBMWD and CBMWD 2005 Urban Water Management Plans (Appendix 8, References 3-3 & 3-4) as part of the larger Conservation Program. Also, both WBMWD and CBMWD are currently developing Water Conservation Master Plans that identify this project as meeting the long-term goals of water supply reliability through conservation measures. Finally, this project is part of the MWD Five-Year Conservation Strategy Plan (see Appendix 5-3). This plan was adopted in 2005 and the goal is to conserve 1.1 million af of water by 2025.

This project will act as a pilot project for the region as well as CBMWD and WBMWD to determine the positive effects: reduced urban runoff, increased water quality, and decreased potable water supply usage. To date, 16 irrigation controllers have been installed in the WBMWD service area and 17 in the CBMWD service area. There are a total of 30 more sites that are planned to be installed in the next fiscal year due to limited funding. Since this is a pilot program, it will require more funding in order for additional controllers to be installed. For the next fiscal year, the landscape program will make up 37 percent of the entire conservation program budget.

### Project Map

The project location is identified in **Figure 5-6**; however, exact locations for irrigation controllers and demonstration gardens will be identified once the grant is awarded. Instead, the figure shows the CBMWD and WBMWD service areas since sites will be identified by working with cities and stakeholders within the service areas. In addition, this map identifies the major rivers that are affected by the reduced runoff as a result of the use of the controllers. **Figure 5-7** identifies the areas considered as disadvantaged communities that were also listed in the Step 1 application. **Figure 5-8**, shows the ASBS at Point Dume in the City of Malibu that would be positively affected by the impact of the controllers.

3. Large Landscape Conservation, Runoff Reduction and Educational Outreach Program

Figure 5-6: Large Landscape Project Location

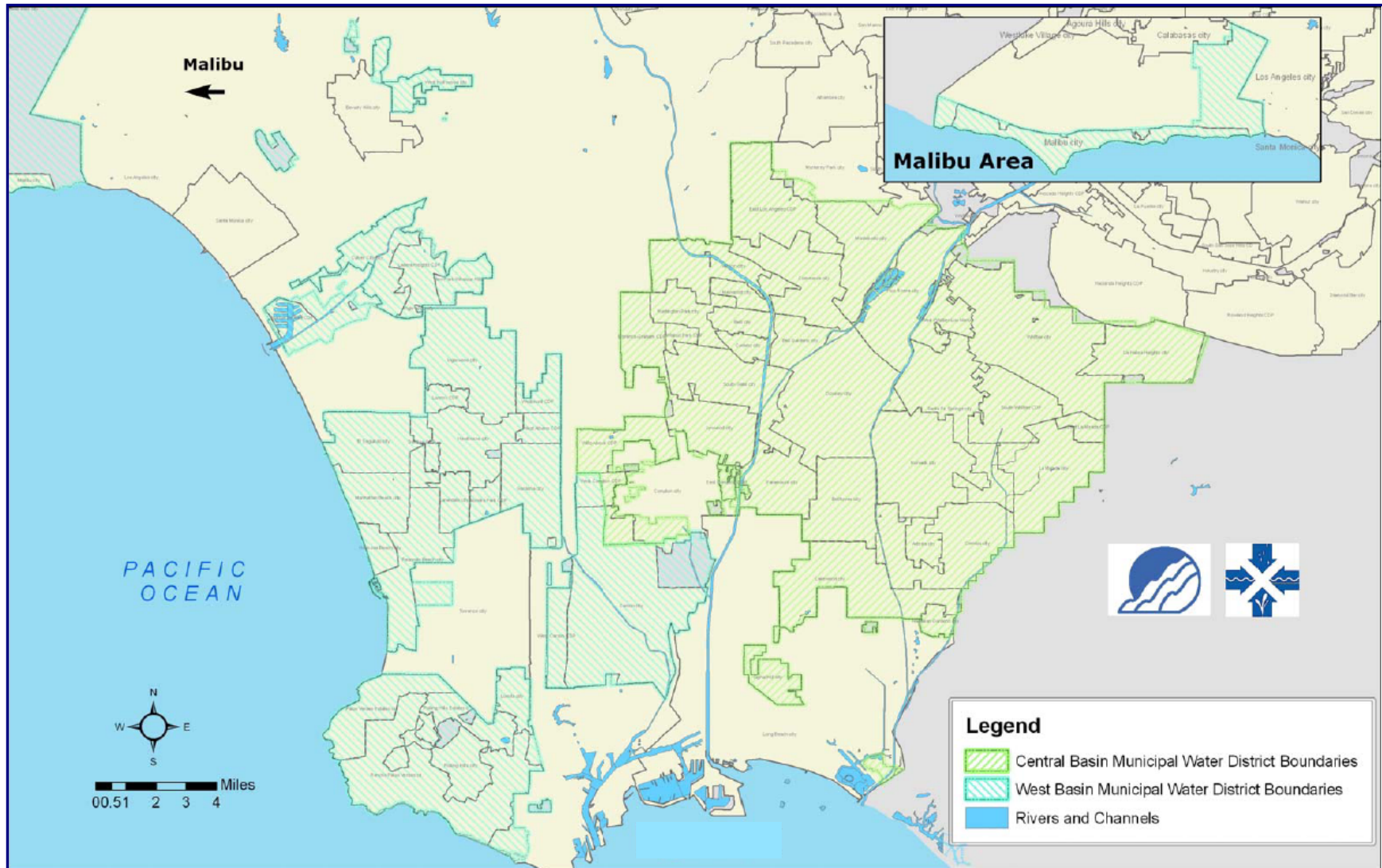




Figure 5-7: Large Landscape Project Disadvantaged Communities

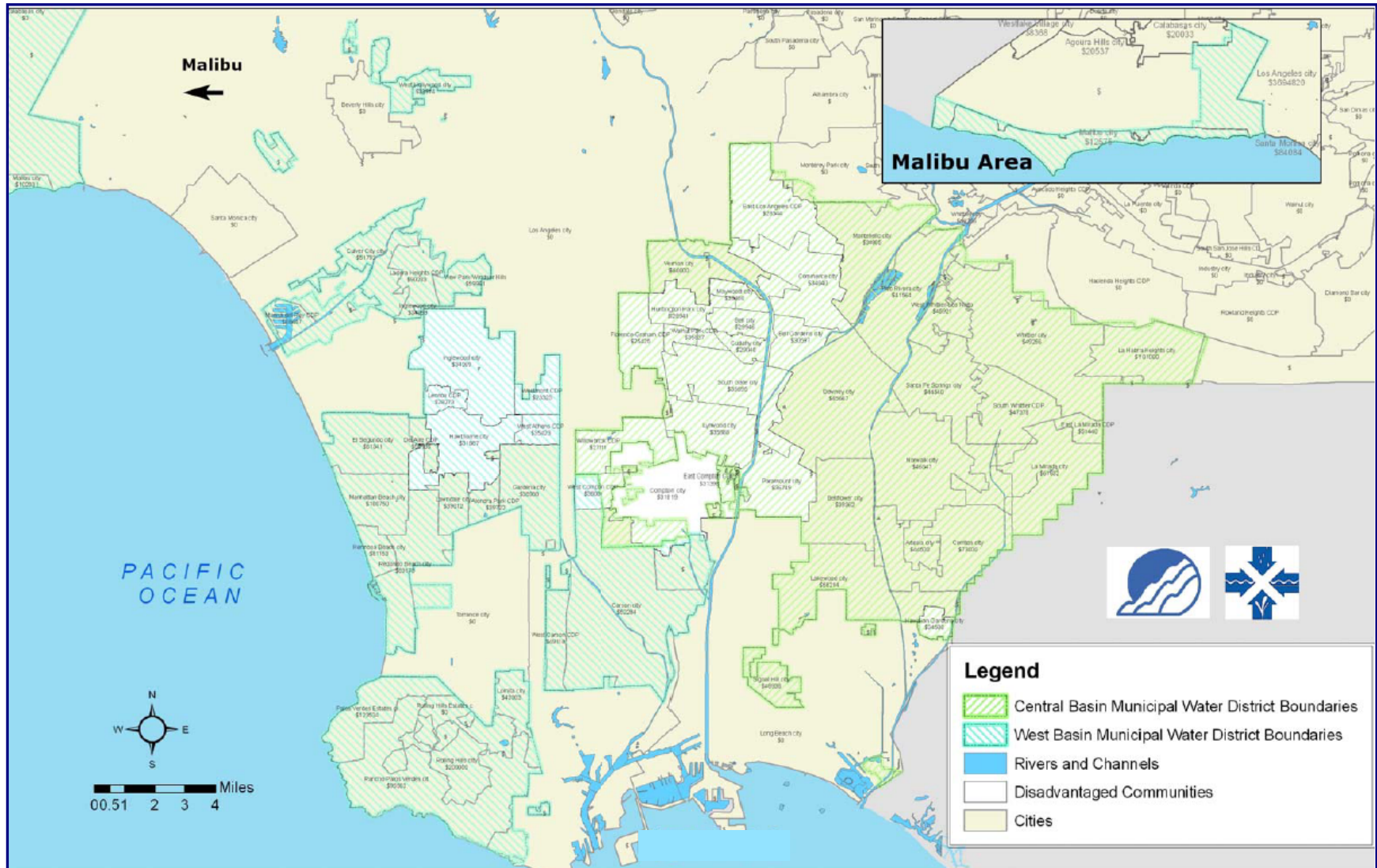


Figure 5-8: Large Landscape Project Area of Biological Significance



## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (b) Land Purchase / Easement

There are no land or right-of-way acquisitions necessary for this project because these are simple installations that replace the property's current, inefficient watering system. The existing systems will be replaced with the "smart, weather-based" systems that retrieve weather data in order to water the landscape with the appropriate amount based on the weather conditions.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

As part of the IRWMP Process, CBMWD and WBMWD have presented its project to the sub-regional stakeholder groups and received positive feedback. All of the watershed coordinators will be working with CBMWD and WBMWD to help market and implement the program.

CBMWD and WBMWD are currently developing formal Water Conservation Master Plans along with 5-Year Action Plans. As part of the development process, two stakeholder workshops have been held (March 6, 2006 and April 27, 2006) to receive input from cities, water agencies, environmental groups, residents and others. Stakeholders recommend conducting landscape projects as a way to conserve water and reduce runoff. Many of the stakeholders are helping promote the program via their communication channels located throughout the various watershed areas. Included in the budget is funding for marketing and outreach efforts which will include materials for the workshops, rebates and brochures for the weather-based irrigation controllers, and information about the demonstration gardens.

#### *Design / Engineering*

This project has been designed from the aspect of an implementation project and not a construction project in that irrigation controllers have been selected and only sites now must be selected. CBMWD and WBMWD has been working with several cities and water agencies to begin identifying suitable sites for the installation of these "Smart" irrigation landscape controllers to conserve water and reduce dry-season runoff into the watersheds. This project is contingent on final award from the State to begin implementation in May 2007.

#### *Environmental Documentation*

The project does not require environmental documentation because it is not a construction project nor will it have any adverse environmental impacts.

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### 3. Large Landscape Conservation, Runoff Reduction and Educational Outreach Program

#### *Permit Acquisition*

Permits are not required because project irrigation controllers will just replace existing irrigation controllers at project sites. Nor is there a need for a permit for the landscape classes or demonstration gardens.

#### **(e) Environmental Compliance / Mitigation / Enhancement**

The project does not require any environmental compliance, mitigation, or enhancement because it does not require environmental documentation.

#### **(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007



3. Large Landscape Conservation, Runoff Reduction and Educational Outreach Program

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

The project will be administered by several agencies. WBMWD and CBMWD will take lead roles in administering the project and program partners will be responsible for the following:

Organization	Administration Responsibilities
HydroEarth	<ul style="list-style-type: none"> <li>Responsible for providing WBMWD and CBMWD with quarterly reports on the number of irrigation controllers installed and locations of the installations.</li> <li>Providing water usage comparison reports for pre and post controller installations.</li> <li>Conducting and monitoring pre and post runoff reduction analysis and creating reports of the results.</li> <li>Testing design and reporting for drought, emergency and peaking capabilities.</li> </ul>
Surfrider Foundation	Provide WBMWD with quarterly reports on the number of "Ocean Friendly" landscape classes conducted and "Ocean Friendly" demonstration gardens developed.
Vendor (to be Selected)	Provide CBMWD with quarterly reports on the number of landscape classes conducted and Native Plant demonstration gardens developed.
WBMWD / CBMWD	Provide quarterly reports showing activity conducted and program results.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (d) Construction / Implementation

This project has been designed and is ready to be implemented upon award of contract. Material and installation quotes have been received from HydroEarth, Inc. and cost estimates have been established for the implementation of the landscape classes and demonstration gardens. The tasks of the project include:

- Locate sites to install the irrigation controllers.
- Coordinate with the Surfrider Foundation to determine the locations to conduct the "Ocean Friendly Garden" classes.
- Coordinate with the CBMWD vendor to determine the locations for conducting the Landscape classes.
- Coordinate with cities to determine the locations to install the demonstration gardens.
- Manage all marketing and outreach efforts, including the rebates that will be distributed to the attendees of the workshops.

## 3. Large Landscape Conservation, Runoff Reduction and Educational Outreach Program

The project is ready to be implemented upon grant contract signature in May 2007. The implementation schedule is to install approximately 40 irrigation controllers per month. The schedule is approximately 4 years because of the total amount of irrigation controllers that need to be installed (1,950).

Construction / Implementation Submittals	
Annual Implementation Summary Report	Mar 2008, 2009, 2010, 2011
Final Implementation Summary Report	Mar 2012

### (f) Construction Administration

Construction administration/management will be performed by WBMWD and CBMWD staff and will include the following activities:

- Manage implementation of irrigation controllers by Hydroearth Inc.
- Check that work is performed according to contract documents.
- Manage the location of the installations, the landscape workshops and the demonstration gardens.
- Track work tasks and deliverables on the project's path.
- Perform or review progress updates and reports.
- Track work completion for payments.
- Keep track of work performed on "time and materials" basis.

Construction Administration Submittals	
Quarterly Progress Reports	Quarterly

## Discussion of Standards and Merits

For the landscape irrigation controller component, the project will utilize weather-based irrigation sprinkler controllers which receive weather data from a server and the Hydrozone Editor. The Hydrozone Editor is a scheduling engine that utilizes all 19 Irrigation Association Best Management Practices to develop the irrigation schedule for the various irrigation zones. In order to provide plants and turf the right amount of water, inputs will be made for each site for the following criteria:

- Hydrozone
- Historical ET (10 year)
- Historical Rainfall (10 year)
- Plant Species (Ks)
- Plant Stress
- Plant Density
- Plant Microclimate
- Precipitation Rate
- Soil Type
- Available Water Capacity in the soil
- Intake Rate for the soil

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### 3. Large Landscape Conservation, Runoff Reduction and Educational Outreach Program

- Cycle Period (CP)
- Soak Period Factor (Sp)
- Slope
- Net Slope Factor
- Root Depth
- Distribution Uniformity
- Water Efficiency of the Irrigation Manager
- Depletion
- ET %
- Area and Flow Rate

## Coordination with Regional Agencies and State

WBMWD and CBMWD have partnerships with the Surfrider Foundation and MWD.

WBMWD has a MOU with Surfrider Foundation (see Appendix 5-3) to initiate the “Ocean Friendly Gardens” program to educate the public and local governments on the water conservation and water quality benefits of drought-resistant landscaping and water-saving irrigation devices and practices. Surfrider Foundation is a non-profit environmental organization dedicated to the protection and enjoyment of the world’s oceans, waves and beaches for all people, through conservation, activism, research and education. The MOU is an agreement between WBMWD and Surfrider Foundation to undertake the development, implementation and administration of the “Ocean Friendly Garden” workshops and demonstration gardens. This MOU was entered into on June 27, 2005 and shall have a term of two years or until an Implementation Agreement is provided to Surfrider Foundation to implement the program.

CBMWD and WBMWD each have an agreement with MWD (see Appendix 5-3) for residential water conservation item funding. This Agreement is for WBMWD and CBMWD to participate in the MWD Conservation Credits Program to replace non-conserving items within their service areas. In addition, this Agreement establishes the MWD funding contribution, which shall be in the form of credits on MWD water service invoices to CBMWD and WBMWD. As part of the Project, CBMWD and WBMWD shall use and maintain an electronic database for any conservation items installed, distributed, vouchered, or rebated by CBMWD and WBMWD or their vendors, to avoid duplicate distributions and to determine the saturation rate of items by the appropriate geographic delineation. This Agreement is for a term of nine years, until July 2015.

## 4. Las Virgenes Creek Restoration Project

### Detailed Project Description

#### Project Need

The Las Virgenes Creek Restoration Project will provide the Malibu Creek watershed's greatest need, an example of a successfully restored urbanized creek segment to native conditions. The restoration will create healthy stream and riparian habitat as well as improve water quality through restoration to natural conditions. To date, all necessary permits have been obtained and are current, the design plans and specifications have received final approval, and support from the areas residence, business owners, neighboring agencies, and various other stakeholders.

#### Project Description

The project involves the restoration of Las Virgenes Creek to reestablish riparian habitat by removing a concrete channel and establishing native conditions to enhance the water quality and environment of the area. In addition to providing more native habitat in the region, the restoration will reestablish direct connectivity between the two existing riparian communities to the north and south of the concrete segment.

In 1977, approximately 400 linear feet of trapezoidal concrete channel lining with a 45-foot bottom width was constructed in the Las Virgenes Creek between Highway 101 and the Agoura Road Bridge, disrupting the wildlife corridor between the Baldwin Open Space and Malibu Creek State Park and removing all viable riparian habitats in this creek segment. Successful restoration would afford better cover for local wildlife and promote increased wildlife movement up and down the steam course. This project also includes a public outreach and education component as part of the restoration design process. For example, storyboards will feature information on water conservation practices designed to reduce local residential and commercial use of potable water. This project has all planning, permitting, and engineering design work completed and is ready to go to bid for construction upon signature of the grant contract.

The main objective of the restoration is to restore a native creek side habitat to enhance the biological environment and the aesthetics of the area. In addition to providing more native habitat in the region, this project is a high priority for watershed protection because the restoration would help heal some habitat fragmentation in the area. Las Virgenes Creek provides refuge and a safe passage for wildlife to travel between the Baldwin Open Space and the Malibu Creek State Park. This restoration would re-establish direct connectivity between these two existing riparian communities to the north and south of the concrete segment. Successful restoration would afford better cover for local wildlife and promote increased movement of animals up and down the steam course. Also, the creek is a tributary to the Malibu Creek and Malibu Lagoon.

The restoration would also be used to educate the public regarding urban watershed issues. The restoration design includes a footpath to encourage public access to the restoration area and a gazebo overlook that will be outfitted with an educational sign program to increase awareness of watershed protection issues. The City of Calabasas' co-sponsor on this application, Mountains Restoration Trust (MRT), will design and implement a public outreach program to include pre-project signage and stakeholder workshops to educate the community about the project, build consensus for the project design

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#### 4. Las Virgenes Creek Restoration Project

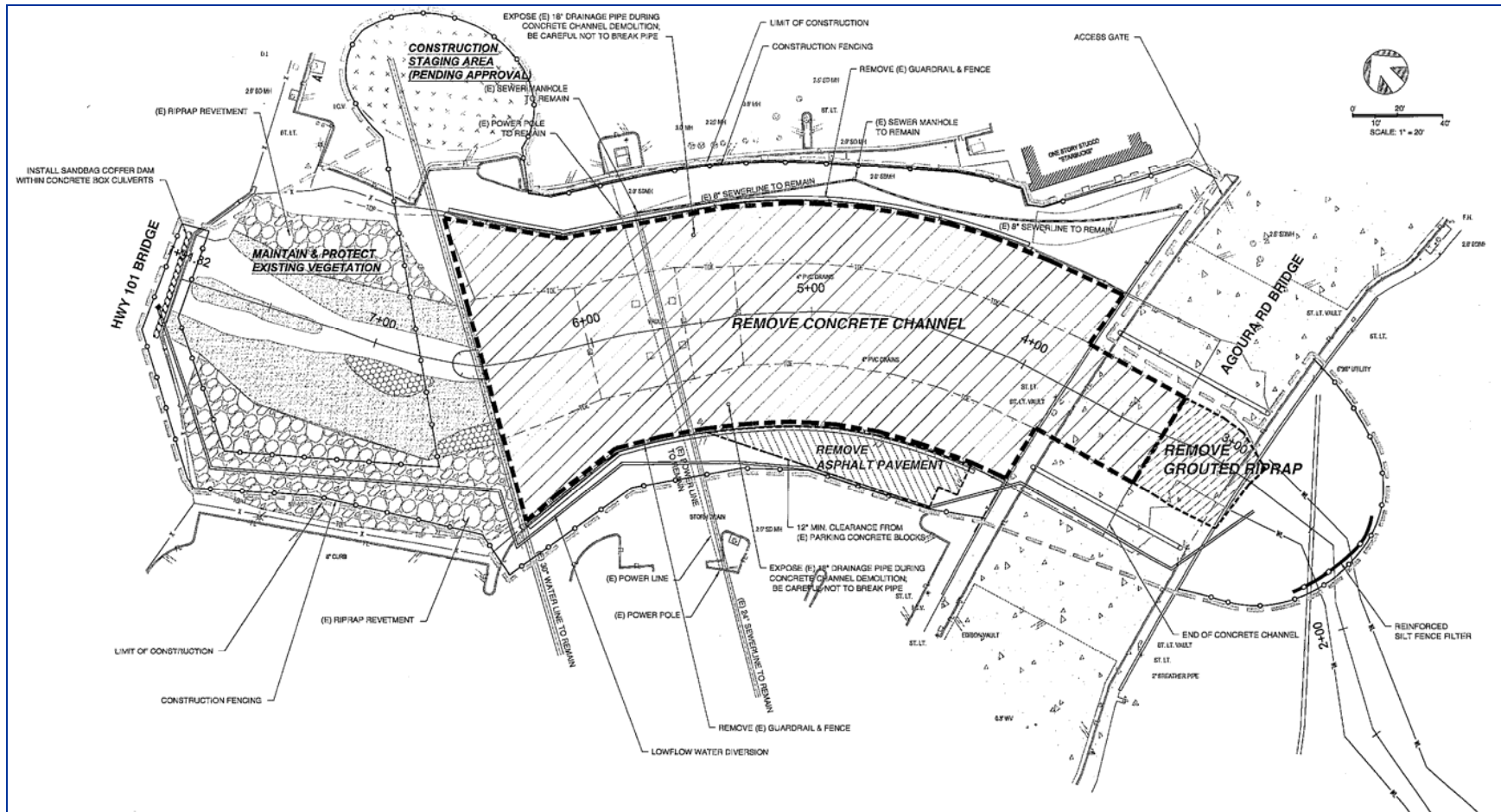
and generally increase awareness of the status of the creek and the surrounding watersheds and a post-project sign program for implementation in the gazebo.

This project is identified as a high priority project in the Calabasas Creek Master Plan and Las Virgenes Gateway Master Plan (see Attachment 8, References 4-2 & 4-3). It will have a regional impact on policy for urban stream restoration in the Santa Monica Mountains. There are numerous locations throughout this region where flood control agencies have channelized natural stream courses. This project seeks to recreate the flood control facility in an environmentally harmonious fashion that will undo the wildlife corridor fragmentation, provide essential riparian habitat, protect fish passage, and still provide adequate flood control within the confines of the engineered channel that exists today. All objectives of this project are consistent with goals and direction of the Malibu Creek Watershed agencies, nonprofits, and environmentalist. If successful, other interested agencies will be encouraged to restore their own channelized creek segments. This shared vision and opportunity to work incrementally toward full stream restoration from ocean to headwaters will be realized throughout the region.

#### Project Map

Project location and facilities are identified on **Figure 5-9**.

Figure 5-9 Las Virgenes Creek Detailed Project Map



## 4. Las Virgenes Creek Restoration Project

## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (b) Land Purchase / Easement

The maintenance of the concrete channel was transferred from LACFCD to City of Calabasas. The deed was recorded on February 28, 2002.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

During the design phase of the project, Calabasas conducted several meetings with stakeholders and addressed their 50% and 90% design review comments.

#### *Design / Engineering*

The 100% Design is complete and was approved by the LACDPW, United States Army Corps of Engineers (USACE), and CDFG. See Appendix 5-4 for the design documents.

#### Design Submittals

Final construction documents	Nov 2005
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#### *Environmental Documentation*

For CEQA compliance, an Initial Study was completed in February 2005 and a MND was approved by the Calabasas City Council in March 2005. The Notice of Determination was filed with the Los Angeles County Recorder in April 2005. See Appendix 5-4 for the environmental documentation.

#### Environmental Documentation Submittals

Initial Study	Feb 2005
Mitigated Negative Declaration	Mar 2005
Notice of Determination	Apr 2005

#### *Permit Acquisition*

All permits have been secured. See Appendix 5-4 for the permits.

#### Permitting Submittals

#### Purpose

#### Approval Date



## 4. Las Virgenes Creek Restoration Project

Permitting Submittals	Purpose	Approval Date
USACE 404 Permit	Open-cut construction in waterways	May 2005
CDFG Streambed Alteration Agreement	Lake and streambed alteration notification	Mar 2005
RWQCB – Water Quality Act 401 Certification	Water Quality Certification	May 2005
Los Angeles County Coastal Development Permit	Approving the design	Feb 2005

**(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. Since post-construction monitoring will be part of this allocation, a QAPP will be developed. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Quality Assurance Protection Plan	Feb 2007
Labor Compliance Plan	Feb 2007
Monitoring Plan	Feb 2007

## 4. Las Virgenes Creek Restoration Project

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

The project administration will be performed by the City of Calabasas Public Works Department with assistance from a consultant on retainer (Willdan). Administration of the project shall consist of quarterly progress report, administering the bid process, staff reports to the City Council regarding contract award and completion, and general project management responsibilities such as meetings, status reports, Invoice to State and budget tracking.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (d) Construction / Implementation

The construction contract will be awarded to the lowest responsive bidder in a competitive bidding process. The City will advertise for bids upon signature of the grant contract. The advertisement period shall be 45 days with a staff report requesting the City Council to award the contract at the next scheduled City Council meeting. Upon award by the City Council, the City shall issue a Notice to Proceed within 30 days. Construction tasks will include:

1. Demolition and removal of existing concrete channel and appurtenant improvements
2. Grading of new creek bed and trail, including construction of retaining walls
3. Placement of grade control structures (rock-soil matrix and willow staking, boulders, etc.)
4. Gazebo construction
5. Planting and Irrigation, including installation of erosion control fabrics

Construction / Implementation Submittals	
Notice to Proceed	Jul 2007
Notice of Completion	Nov 2007
Final Construction Summary Report	Nov 2007

### (e) Environmental Compliance / Mitigation / Enhancement

The MND specifies tasks to be carried out before and during the construction phase by the contractor. These tasks include:

- BIO-1: Pre-construction survey by a qualified biologist
- BIO-4: Prior to construction, erosion control and water quality BMP devices shall be installed
- AIR-1: Implement dust control BMPs at the project site

## 4. Las Virgenes Creek Restoration Project

- AIR-2: Implement dust control BMPs at all stockpiled material
- AIR-3: Reduce construction vehicle traffic to 15 MPH
- AIR-4: Trucks hauling soil shall have one foot freeboard to reduce deposition.
- AIR-5: Areas subject to soil disturbance shall be treated for long-term soil stability
- HAZ-1: Hazardous material plan shall be incorporated into the overall SWPPP and approved by the Los Angeles RWQCB.
- WQ-1: Develop a SWPPP that will be reviewed and approved by the Los Angeles RWQCB.
- WQ-2: Limit-in-channel work to low precipitation periods, and divert flow from limits of work
- WQ-3: Ensure construction activity does not increase turbidity.
- NOI-1: Construction shall occur during certain periods of the day
- NOI-2: Construction equipment shall utilize noise control techniques

All measures specified in the MND will be carried out in the Special Provision section of the project specifications.

### (f) Construction Administration

Construction administration activities will be performed by the City of Calabasas Public Works Department. Also, Questa Engineering and Willdan will provide assistance on as-needed basis during the construction phase through their On-Call Professional Services Contract. Construction administration shall consist of conducting preconstruction meeting, field inspections, status meetings with contractor, paying invoices, review of change orders, and other general construction engineering services.

Construction Administration Submittals	
Field Inspection Reports	Quarterly
Construction Progress Reports	Quarterly

## Discussion of Standards and Merits

In 1999, Calabasas commissioned a feasibility study as a result of the Las Virgenes, McCoy and Dry Canyon Creeks Master Plan for Restoration – Phase I: Comprehensive Study (see Appendix 5-4) to consider alternatives to the existing concrete trapezoidal channel that would facilitate wildlife movement and provide native riparian habitat. The Feasibility Study for Removal of Concrete Lining in Las Virgenes Creek Near Agoura Road (see Appendix 5-4), completed in February 2000, concluded that either a gabion structure or concrete block revetment liner would be feasible alternatives to the existing concrete channel.

In 2003, Questa Engineering completed a detailed Feasibility Study (Attachment 8, Reference 4-1) that included a public and stakeholder review process, culminating in City Council approval of the conceptual design. The final restoration project design is based on the approved concept and provides an integrated resources approach that will provide useful riparian habitat while still meeting the flood control requirements through this creek segment.

## Coordination with Partner Agencies and Organizations

Calabasas and MRT were awarded an Urban Stream Restoration Grant, No. P13-047, in 2002 (see Appendix 5-3) for the educational outreach and environmental enhancement portions of the project. The grant is worth \$187,750 and is being administered by the California Department of Water Resources (DWR).

## 5. Malibu Creek Watershed Water Conservation, Runoff Reduction and Native Flow Restoration Project

### Detailed Project Description

#### Project Need

The Malibu Creek Watershed Water Conservation project is located in a watershed of an intimate mixture of nature and urbanization. Waterbodies within the watershed are primarily natural creek systems that convey urban runoff to the ocean. This project is an effort to reduce urban runoff with the added benefit of water conservation and enhanced with features proposed.

#### Project Description

This project combines and integrates a project developed by the City of Westlake Village to reduce urban runoff and conserve water on City-owned public lands, with a project developed by the Las Virgenes Municipal Water District (LVMWD) to reduce urban runoff and conserve water on residential parcels in the Malibu Creek Watershed. The combined project addresses urban runoff from both residential and City-owned lands in the City of Westlake and residential properties in the Malibu Creek watershed, reducing administrative duplication and providing homeowners in the City of Westlake a potential opportunity to tie into the City of Westlake Village's centralized irrigation controller system. This approach could serve as a model for the other cities in the watershed, and reduce runoff caused by homeowner inattentiveness to irrigation scheduling. Benefits include water supply (reducing over-irrigation and water imports from the State Water Project / Bay Delta), water quality (reducing urban runoff into Malibu Creek and its tributary streams), habitat (reducing nutrient loads to streams listed for algae and eutrophication impairment), and recreation (reducing the potential for beach closures due to aseasonal lagoon breaching adjacent to Surfrider Beach in Malibu).

Each project is described below, followed by a description of how the projects will be integrated.

#### *City of Westlake Project*

The City of Westlake Village, in partnership with LVMWD, will be replacing irrigation controllers citywide to reduce water demand and runoff to Westlake Lake and Malibu Creek. Through the use of new technology, evapotranspiration (ET) controllers, the City of Westlake Village will be able to monitor local weather on a daily basis and automatically adjust the controller irrigation schedule based on plant watering needs.

The City of Westlake Village is planning on a phased implementation plan over the next few years. The phasing method is designed to build the system in a very specific, methodical order that will maintain the operation of the existing irrigation system while sections of the system are upgraded and adjusted to maximize efficiency.

The last phase of the implementation plan will be the replacement of the battery operated units. The battery operated units are powered by a solar array imbedded in the lid of the irrigation controller box. This battery unit is also capable of being remotely controlled by the central station.

The order of installation will generally be as follows:

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5. Malibu Creek Watershed Water Conservation, Runoff Reduction and Native Flow Restoration Project

1. Central Control Station
2. Controllers with high water use
3. Controllers that serve new landscape projects
4. Remaining controllers in the City of Westlake Village System
5. Battery operated controllers

*Las Virgenes Municipal Water District Project*

The LVMWD project consists of both indoor and outdoor conservation projects. Both projects are a continuation of projects initially co-funded via District and Proposition 13 funds. However, the Proposition 50 phase of these projects will enjoy a higher benefit / cost ratio by taking advantage of information systems and administrative procedures already in place and enabled by the earlier grant.

**Indoor conservation:** Toilet flushing and clothes washing are the two largest indoor water uses in the LVMWD service area. For this reason, since the 1990's LVMWD's indoor conservation program has focused on replacing inefficient toilets and washers with high efficiency devices. Despite substantial success in the single family residential market, LVMWD has had limited success in the multi-family and condominium / homeowner association (HOA) sectors because the residential rebate does not cover installation costs. To address this financial disincentive, LVMWD secured supplementary Prop. 13 funding to increase the rebate amount from \$60 per retrofit to \$150 per retrofit, and conducted an active outreach effort to HOAs and multifamily residences (MFRs) to alert them to the increased rebate and the need to reduce water imports into the Malibu Creek watershed and treated wastewater flows into Malibu Creek. The project met its objective of 500 HECW retrofits, and exceeded its objective of 500 HOA/MFR retrofits by 280% (1,400 retrofits). The project also provided an unexpected opportunity to simultaneously retrofit 866 showers with low-flow showerheads and 1480 faucet aerators at a large apartment complex, resulting in additional water savings. This indoor conservation project yield lifetime water reduced imported water by 540 acre-feet. Because this water is used indoors and then treated at the Tapia treatment plant, the project also reduced the volume of treated wastewater entering Malibu Creek by the same amount, helping to restore native flows in the creek.

Proposition 50 funding is sought to continue this successful program, using the proven outreach and implementation model already in place. 100 percent of the requested funds are for materials (i.e. water efficient water fixtures).

**Urban Runoff Reduction / Outdoor conservation:** As for the indoor conservation element, this project seeks funding to continue a successful grant co-funded project that will run out of funds this year. The outdoor conservation element uses existing information systems developed under the previous Prop. 13 funded effort to identify residential parcels with persistent, substantial irrigation runoff in proximity to stormdrains that drain to Malibu Creek. Once identified, residents are offered water efficient equipment rebates (including installation labor reimbursements) and free on-site assistance to upgrade and fine-tune their irrigation systems to eliminate runoff from their properties. Equipment reimbursements range from rebates for new weather based irrigation controllers (WBICs) and drip irrigation systems to reimbursements for labor and materials to repair degraded irrigation systems. Both water use and runoff are monitored at each participating address to verify the elimination of runoff.

The earlier Prop. 13 funded project developed the Geographic and Customer Water Use Information Systems necessary to locate residential parcels with persistent high runoff. This Prop. 50 request is solely to fund irrigation system improvements at identified parcels.



### *Project Integration*

**Concept Integration** - The central concept underlying both the LVMWD and City of Westlake Village projects is that existing water conservation programs can be tailored and enhanced to target those water uses that result in the largest sources of dry weather urban runoff. In this way, multiple benefits are realized and maximized to decrease dependency on imported State Water Project water, improve water quality in regional coastal streams, increase the region's progress towards compliance with bacteria and nutrient TMDLs, and reduce the volume of non-native flows in Malibu Creek and Malibu Lagoon.

**Project Integration** - LVMWD and City of Westlake Village staff have worked together to integrate four "stand alone" projects - toilet rebates, washer rebates, and residential and City of Westlake Village irrigation improvement projects - to achieve the above multiple benefit objectives, and to coordinate and implement the projects cooperatively to ensure minimal duplication of effort. Some examples:

- Water supply benefits developed once for both projects from a common set of water savings calculations
- Project mapping for both projects using the LVMWD Geographic Information System and digitized aerial photography
- Planning a single centralized weather based irrigation controller for both public and residential customers, operated by the City of Westlake
- Collaborative grant administration and reporting built into the project, saving the time and expense of both project proponent and DWR staff to write and review quarterly reports

The project description has been modified to integrate two local and similar projects proposed by LVMWD and the City of Westlake Village. This partnership will facilitate a line of communication between the local water agency and the client city, and to "mine" the collaborative arrangement for advantages such as those identified above (see project integration discussion). Other changes were made to provide greater detail of the combined project consistent with information requested in Step 2.

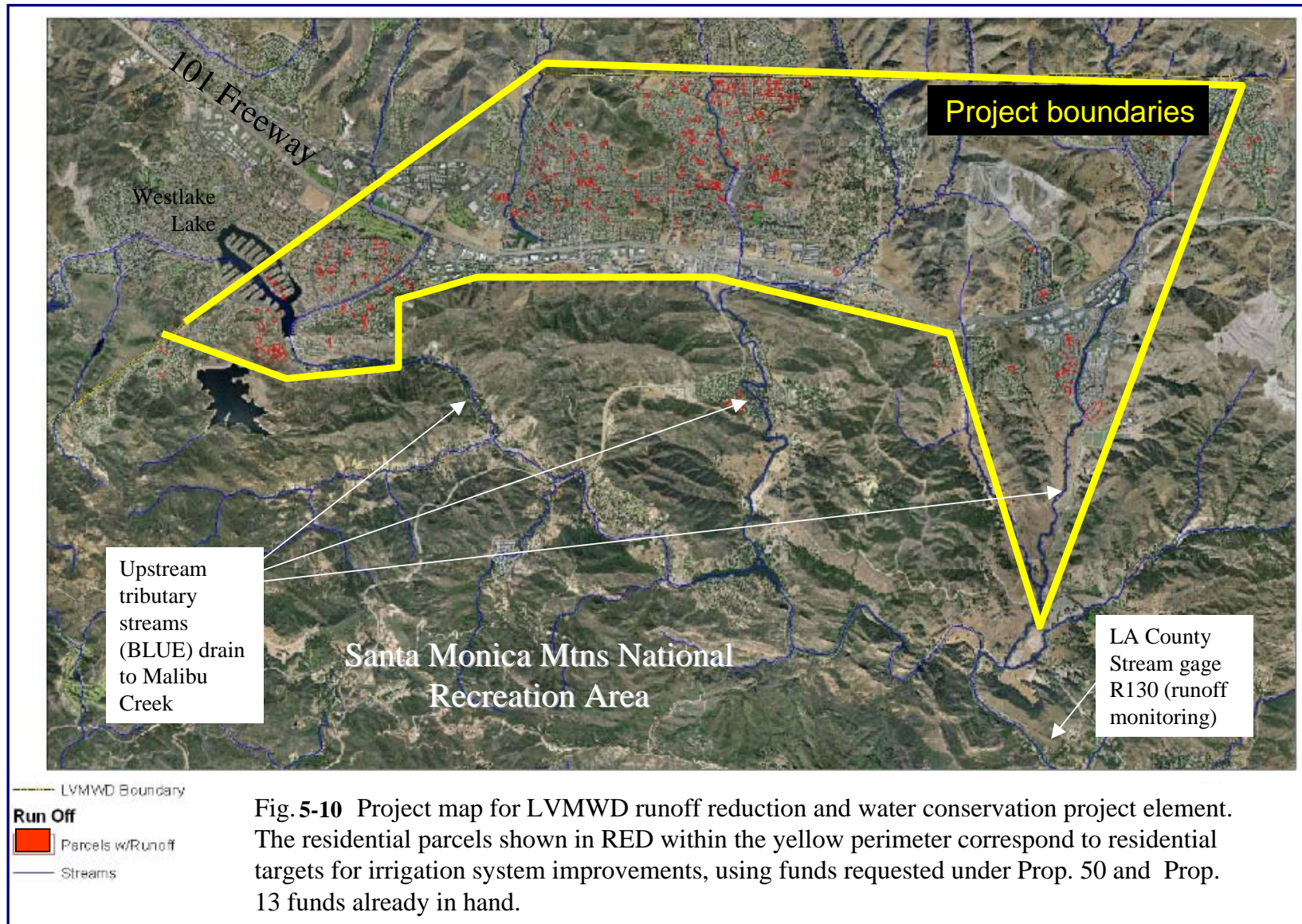
Replacement of the citywide controllers is a component of a larger citywide water conservation plan. In 2000, LVWMD conducted a water usage study as part of a MWD grant for which the City of Westlake Village participated (Letter Agreement No. 19139 for Alternative Irrigation Scheduling Methods). LVWMD identified several items that caused high water usage and irrigation runoff in the absence of weather-based irrigation control. This Prop. 50 project will implement several recommendations made in that study, including installation of weather based irrigation controllers, followed by replacement of irrigation lines and heads to minimize overspray and runoff, and the redesign/landscaping of center road medians to concave instead of convex profiles and the creation of buffer zones between landscaped areas and streets.

Weather-based irrigation controllers and high efficiency washer and toilet rebate programs are described in MWD Integrated Resources Plan (Appendix 5-5).

## **Project Map**

Project location and facilities are identified on **Figure 5-10**. In addition, the map identifies the proximity to Westlake Lake, a 303(d) listed waterbody that is believed to be impacted by the irrigation runoff. Monitoring locations identified shown on the map are further discussed in Attachment 9.

**Figure 5-10: Malibu Creek Project Location and Facilities**



**Fig. 5-10** Project map for LVMWD runoff reduction and water conservation project element. The residential parcels shown in RED within the yellow perimeter correspond to residential targets for irrigation system improvements, using funds requested under Prop. 50 and Prop. 13 funds already in hand.

## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Work to be performed under this task will consist of quarterly progress reports, request for proposals, product/proposal selection, letting of the installation contract, periodic staff reports to the City Council, and general project management tasks such as irrigation system installation status reports, meetings and installation supervision.

### (b) Land / Right-of-Way Acquisition

Land acquisition is not a part of this project. Units to be installed at residential locations will be requested and installed by the homeowner under LVMWD oversight. The citywide irrigation controller replacement will occur within the City of Westlake Village right-of-way.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

The City of Westlake Village's Landscape Maintenance Assessment District, and City General Fund have secured funds for City of Westlake Village portion of the project under the Capital Improvement section. LVMWD has included funds for the project cost-share in its FY 06-07 preliminary operating budget, financed from water sales.

#### *Design / Engineering*

The Preliminary Design was completed in January 2006 and included project siting, citywide facility layout, and a cost estimate. No design engineering was required for the LVMWD project element, as it consists solely of rebates for homeowner installed retrofits.

Final design and construction documents will be completed prior to grant award, which is expected in November 2006.

Design Submittal(s)	
Preliminary design	Jan 2006
Final construction documents	Nov 2006

#### *Environmental Documentation*

The project does not require any environmental documentation.

*Permit Acquisition*

The project does not require any permit for implementation.

**(e) Environmental Compliance / Mitigation / Enhancement**

The project does not require any environmental compliance, mitigation, or enhancement because it does not require environmental documentation.

**(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Quality Assurance Protection Plan	Feb 2007
Labor Compliance Plan	Feb 2007



## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Work to be performed under this task will consist of quarterly progress reports, request for proposals, product/proposal selection, letting of the installation contract, periodic staff reports to the City Council, and general project management tasks such as irrigation system installation status reports, meetings and installation supervision.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (d) Construction / Implementation

Construction will be performed by a general contractor that will be selected during a standard low-bid process for City projects.

There is no construction for the LVMWD element of the project. That element involves rebates to owner-installed Ultra Low Flow Toilets (ULFT) and High Efficiency Washers (HEW) and irrigation system improvements.

Construction Submittal(s)	
Notice to Proceed	May 2007
Notice of Completion	Nov 2008
Final Construction Summary Report	Jan 2009



## 6. Morris Dam Water Supply Enhancement Project

### Detailed Project Description

#### Project Need

The Morris Dam Water Supply Enhancement Project will increase the capture of 5,720 af of local stormwater runoff for groundwater recharge, flood protection and improved water quality. The increased groundwater recharge will meet Main San Gabriel Basin Watermaster goal of maximizing local water sources and reducing dependency on imported water. Flood protection is improved by increased ability to capture storm water during peak flows and water quality is improved when sediment is allowed to settle out of the storm water.

#### Project Description

Water supply for the region comes from groundwater, recharge of local runoff from the San Gabriel Mountains and imported water supplied mostly from the California Water Policy Council and Federal Ecosystem Directorate (CALFED) Bay-Delta area. The demand for water exceeds the local water supply that is captured behind three dams along the San Gabriel River, which are owned and operated by the LACFCD. Morris Dam, which is the furthest south of these three dams on the river supply system, currently must maintain a minimum pool of water to prevent damage from sediments to the outlet works of the dam. This minimum pool restricts the amount of storm water that can be captured by the dam and released for recharge of the Main San Gabriel Groundwater Basin. The project would allow physical modifications to Morris Dam to facilitate a lower operational reservoir pool behind the dam and enable the capture and conjunctive management of the additional water. The reservoir capacity will remain the same and only modifications to the intake structure and control system would be required to gain this benefit. This would help the LACFCD meet the needs of the basin and reduce the amount on imported water required to supplement the basin's needs.

Morris Dam enables LACFCD to regulate storm flows and runoff to downstream spreading grounds. Currently, the LACFCD maintains a 9,720 af operational reservoir pool of water behind the dam (minimum pool) to protect the outlet valves from damage or operational failure due to river flows with high sediment loads. This project will increase allow increased capture of 5,720 af by reducing the required minimum pool to 4,000 af while improving the reliability of the discharge system. As a result, 5,720 af more water can be captured at the dam for downstream groundwater recharge and extraction purposes.

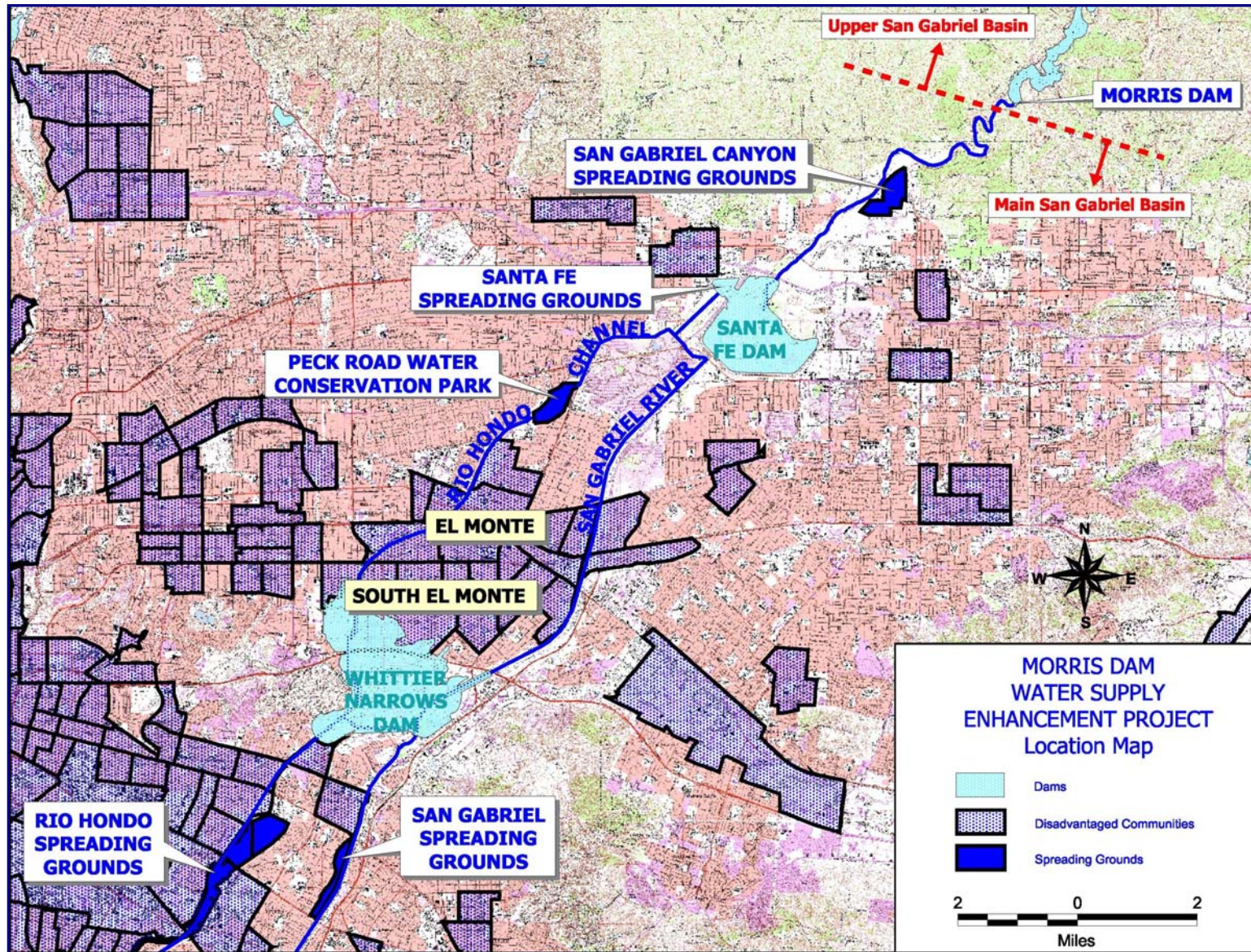
The project entails modifications to the Morris Dam intake, valves and control systems to facilitate a lower operational reservoir pool and reliable conjunctive management of the resulting increased storm water capture. These modifications consist of constructing a new inlet location to take water from the reservoir at a higher elevation and replacing the river outlet valves with a more robust type of valve that is not as susceptible to damage and operational failure from sediment in the outflow. Modifications to the control system include the electrical upgrades needed to power the new valves electric, motor operators and other systems, and intelligent controls so that the valves and gate will be able to control outflows to match capacity of water conservation systems downstream.

## Project Map

Project location and facilities are identified on **Figure 5-11**. In addition, the map identifies Main San Gabriel groundwater basin and San Gabriel River as well as affected natural resources. The disadvantaged communities listed in the Step 1 application are located on the map.



Figure 5-11: Morris Dam Project Location and Facilities





## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration will be performed by the LACFCD. The LACFCD will provide an onsite inspector for the duration of the construction project and will hold weekly construction meetings to discuss project submittals, items of concern, on-going work, anticipated work, schedule, quality control, and safety. Meeting minutes will be prepared and all changes necessary will be handled.

### (b) Land Purchase / Easement

No land or right-of-way acquisition is required for this project because the dam, reservoir, and spreading grounds are owned and operated by LACFCD.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

Stakeholder outreach and comments will be solicited as part of the environmental documentation process.

#### Planning Submittals

Public Workshop Attendance Sheet	Nov 2006
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#### *Design / Engineering*

Initially, project design was split into two parts: 1) Valves Rehabilitation, Control House, and Electrical Upgrade; and 2) Intake Structure Modification. The Final Design for the valves rehabilitation portion was completed in August 2004 (see Attachment 8, Reference 6-3). The 30% Design for the intake structure portion was completed in April 2004 (see Attachment 8, Reference 6-2). LACFCD hired Black and Veatch to prepare these designs. LACFCD will complete the Final Design for the intake structure and will be completed by December 2006.

The valve rehabilitation design included: Preliminary (10%) Design; 30% Design; 50% Design; 90% Design; and Final Design. The Final Design was completed in August 2004 and is the only phase in this design included in the budget because previous phases were prepared prior to November 2002.

**30% Design** – The Morris Dam River Intake Modification Study (see Attachment 8, Reference 6-2) evaluated possible modifications to the existing intake structure to mitigate operation problems associated with sediment build up at Morris Dam was finalized in April 2004. Preliminary concepts were analyzed

## 6. Morris Dam Water Supply Enhancement Project

and a proposed modification was recommended for further evaluation and design. This report outlined potential permit requirements and preliminary costs.

**60% Design** - The 60% Design package for the intake structure modification is anticipated to be completed in July 2006 by LACFCD and submitted to the DWR Department of Safety of Dams (DSOD) for review and approval. An updated cost estimate will be prepared.

**90% Design** - The 90% design package for the intake structure modification will answer all 50% design comments from the State and is anticipated to be completed in September 2006 by LACFCD. This package will be resubmitted for review and comment to DSOD.

**Final Design** - Final Design & Construction Documents will include plans, specifications, construction cost estimate and calculations for the components of the project and a Design Summary Report. The design will be complete in December 2006

The intake structure modification design will provide the final component for this project and will include all necessary calculations, plans, specifications and design summary report. A bid package combining the two components will be developed and submitted for construction. In addition, an updated cost estimate including the final design costs for the intake structure modification will be developed.

Design Submittals	
Valve Rehabilitation, Control House, & Electrical Upgrade Final Design	Aug 2004
Morris Dam River Intake Modification Study (Intake Structure Modification 30% Design)	Apr 2004
Intake Structure Modification 50% Design	Jun 2006
Intake Structure Modification 90% Design	Sep 2006
Intake Structure Modification Final Design	Jan 2007

### *Environmental Documentation*

The project requires compliance with CEQA as part of the environmental review process and, based on an IS Environmental Checklist Form (see Appendix 5-6), CEQA requirements are anticipated to be fulfilled with a MND. The IS will be complete by September 2006 and the Draft MND is anticipated to be distributed in October 2006 and comments will be received through November 2006. The Final MND will then be prepared and is anticipated to be certified by the Los Angeles County Board of Supervisors in January 2007. LACFCD has hired a consulting firm (EDAW) to complete the environmental documentation process.

Environmental Documentation Submittals	
Initial Study Environmental Checklist Form	Apr 2006
Initial Study	Sep 2006
Final MND	Mar 2007

### *Permit Acquisition*

The project has a number of permits required for the project implementation and these permits will be acquired in concurrence with the project design.



## 6. Morris Dam Water Supply Enhancement Project

The project includes activities that, as defined in Section 1602 of the CDFG Code, potentially modify a lake and streambed. Activities include lowering the reservoir to the elevation of the intakes to the dam's outlet works, which are being modified to allow greater flexibility in dam releases, and moving away any sediment that has accumulated up against the outlet works and their intakes. The CDFG oversees compliance with the CDFG Code. A Streambed/Lake Alteration Agreement from the CDFG will be obtained.

The above activities are also regulated by Section 404 of the Federal Clean Water Act, compliance with which is overseen by USACE. The project's activities are within the scope of USACE Nationwide Permit No. 31 (Maintenance of an Existing Flood Control Facilities) or Nationwide Permit No. 33 (Temporary Construction, Access or Dewatering). USACE has already completed the necessary National Environmental Policy Act (NEPA) documents and Decision Notices for its Nationwide Permits.

Before USACE can issue its Section 404 permits, Section 401 of the Federal Clean Water Act requires a water quality certification from the State Water Resources Control Board (SWRCB). The Los Angeles Regional Water Quality Control Board (RWQCB) will process the application and make their recommendations to the SWRCB for permit conditions.

DSOD will be required to approve the final design on the intake modification plans. DSOD has approved the rehabilitation of the valves and control system modification in August 2005. The final approval of the intake structure modification is anticipated by May 2007.

Permitting Submittals	Purpose	Approval Date	Status
USACE 404 Permit	Construction in waterways	May 2007	Cannot be submitted until design is in final stages
CDFG Streambed Alteration Agreement	Construction in a streambed		
RWQCB 401 Water Quality Certification	Complete Dewatering of Reservoir		
DSOD Approval (intake structure modification)	Overview of Dam modification		Design of intake structure modification is will start in May 2006

**(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan (LCP) will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007

## Work Items to Complete through May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration will be performed by the LACFCD Water Resources Division and Construction Division. The LACFCD will provide an onsite inspector for the duration of the construction project and will hold weekly construction meetings to discuss project submittals, items of concern, on-going work, anticipated work, schedule, quality control, and safety. Meeting minutes will be prepared and all changes necessary will be handled.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (d) Construction / Implementation

LACFCD anticipates to advertise for 30 days and to submit a bid package to a short list of qualified bidders. Construction will be performed by a general contractor that will be selected during a low-bid process; however, contractors must show previous work experience in dealing with the type of work anticipated. A pre-bid meeting onsite will be held to outline the anticipated work and answer questions from prospective contractors. Once awarded a 60 to 90 day move-in/staging period is anticipated.

The project will involve fully dewatering the reservoir behind Morris Dam and will require the contractor to relocate fish from the reservoir to suitable downstream locations and institute best management practices to prevent impacts downstream from sediment-laden flows. A dewatering plan will be developed by the contractor and approved by the regulatory agencies prior to start of work. Following dewatering, the contractor will be required to remove existing valves and immediately start the intake structure modification.

As the work continues the contractor will finish the intake structure modification and install the lowest valves first to allow some control of flows as the project progresses. The project will work from lower infrastructure to the top of the dam. Some work will progress concurrently, including the installation of control systems/ electrical system upgrade of the dam. LACFCD will provide a full-time onsite inspector for the entire duration of the project and weekly contractor meetings will be held to discuss all work and any outstanding issues as they arise. The project is anticipated to be completed within 24 months.

Construction Submittals	
Notice to Proceed	Oct 2007
Notice of Completion	Nov 2009
Final Construction Summary Report	Nov 2009

### (e) Environmental Compliance / Mitigation / Enhancement

Environmental compliance, mitigation, and enhancement activities will include benefits to habitat along the San Gabriel River, including increased recreational opportunities. A mitigation plan has not been defined but will be defined during completion of environmental documentation.

The impacts of the project will be temporary and will be fully mitigated. Best management practices (BMP) will be employed for water quality impacts. These BMPs will include desilting basins and check dams to minimize sediment-loading downstream of the dam during dewatering activities and protection measures to ensure minimal impacts to downstream resources. When the reservoir is lowered for outlet modification work, fish in the reservoir (most of which are non-native) will be removed and relocated to recreational areas approved by CDFG. As is the current practice for releases from Morris Dam, the water released from the reservoir during its lowering will be directed to LACDPW numerous groundwater recharge facilities downstream. These facilities include San Gabriel Canyon Spreading Grounds, Santa Fe Spreading Grounds, Peck Water Conservation Park, Rio Hondo Coastal Spreading Grounds, San Gabriel Coastal Spreading Grounds and the soft bottom reaches of the San Gabriel River itself.

The mitigation measures noted above will reduce the project's impacts to levels of non-significance. As a result, a MND will be the project's CEQA document. The MND will document the environmental impacts and the environmental benefits resulting from the project, and will discuss how the project's benefits from greater amounts conserved of local runoff equal, if not exceed, any temporary negative impacts of the project.

The project will obtain a Section 404 permit from USACE. Issuance of Federal permits requires compliance with NEPA. USACE has already completed the necessary NEPA documents. As a result, with USACE issuance of a Nationwide Permit for the project, the project will comply with NEPA.

### (f) Construction Administration

Construction management activities include resident engineering, inspection services, quality control, and general construction management duties. These activities will be performed by the LACFCD.

Engineering services during construction activities include technical support by the design firm, Black and Veatch. These services may include pre-bid conference, design changes /requests for information associated with questions of the design and proposed design changes. Shop drawing review of architectural features including steel and concrete, mechanical valves and operators, and electrical power and control features. Site visits as needed will be performed by Black and Veatch to observe the progress of the contractor and ensure that the project is being constructed in conformance with the design.

#### Construction Administration Submittals

Monthly Construction Reports	Quarterly
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### Discussion of Standards and Merits

LACFCD follows set standards for construction projects as outlined in the Green Book and Grey Book standards that apply to all LACFCD construction projects to ensure a minimum quality of construction work.

Construction materials and submittals will be required at various milestones during the course of the work for LACFCD review and/or approval by DSOD. Contractors will be required to obtain LACFCD

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## 6. Morris Dam Water Supply Enhancement Project

approval of all submittals prior to moving forward with installation/construction of the work. As is its practice, the LACFCD may retain the original designers, Black and Veatch, for submittal review. In addition, significant regulatory oversight is anticipated to ensure minimal environmental impacts due to the project.

### Coordination with Regional Agencies and State

LACFCD will coordinate with local stakeholders (i.e. Committee of Nine, Main San Gabriel Basin Watermaster, etc.) and regulatory agencies (i.e. CDFG, RWQCB) to ensure proper mitigation measures are instituted during construction activities. Coordination between LACFCD and these agencies will be heightened to maximize conjunctive use of the 'new' water supply. Finally, LACFCD will hold stakeholder meetings to open discussion on conjunctive management strategies for this water as a part of the environmental process.

## Detailed Project Description

### Project Need

The North Atwater Creek Restoration Project is part of the overall effort to revitalize the Los Angeles River (LA River) and create much needed open space in the urban areas of the City of Los Angeles (City of LA). It creates wetlands habitat adjacent to the LA River and restores a creek while improving the water quality of discharges to the LA River.

### Project Description

This project will construct physical and structural improvements to address water quality for an area along the LA River. The project will restore the creek at the North Atwater Park for stormwater runoff capture and treatment and provide wetlands habitat linkage to the LA River. This will begin a restoration and revitalization of the LA River and its vicinity where wetlands previously existed. The project will add 4 acres and reconstruct another 5 acres at the North Atwater Park. Furthermore, the project will restore the creek and wetlands to treat runoff from a local storm drain with a drainage area of 44 acres. During the summer, water will be pumped from the LA River to the creek to provide irrigation to help sustain the wetlands and landscape as shown in **Figure 5-12**. In addition, the project will address LA River TMDLs for trash, metals, and nutrients by implementing runoff BMPs to completely remove trash, oil, and sediment from entering the LA River and minimize bacteria waste from horses at the adjacent stables and trails along the river-bank. This project will directly benefit the nearby economically disadvantaged communities of Atwater Village shown in **Figure 5-13** by providing educational and recreational facilities.

The North Atwater Creek Restoration Project is one of a series of riverfront projects. These restoration projects aim at creating wetlands habitat and recreational opportunities by establishing a number of pocket parks adjacent to the LA River. These efforts are currently coordinated and are directed towards the development of the LA River Revitalization Master Plan that is scheduled for completion in January 2007. This project is one of the first opportunities that have been identified for incorporation into this plan. The overall plan involves the following:

- Ensure flood control and public safety needs are met
- Improve the appearance of the LA River and the pride of local communities in it
- Promote the LA River as an economic asset to the surrounding communities
- Preserve, enhance, and restore environmental resources in and along the LA River
- Consider storm water management alternatives
- Ensure public involvement and coordinate Plan development and implementation
- Provide a safe environment and a variety of recreational opportunities along the LA River
- Ensure safe access to and compatibility between the LA River and other activity centers

### Project Map

Figure 5-12 shows the location of the proposed project along with its tributary drainage area. The project is located in the Atwater Village area within the City of LA, adjacent to the LA River.



Figure 5-12: North Atwater Restoration Project Location and Facilities

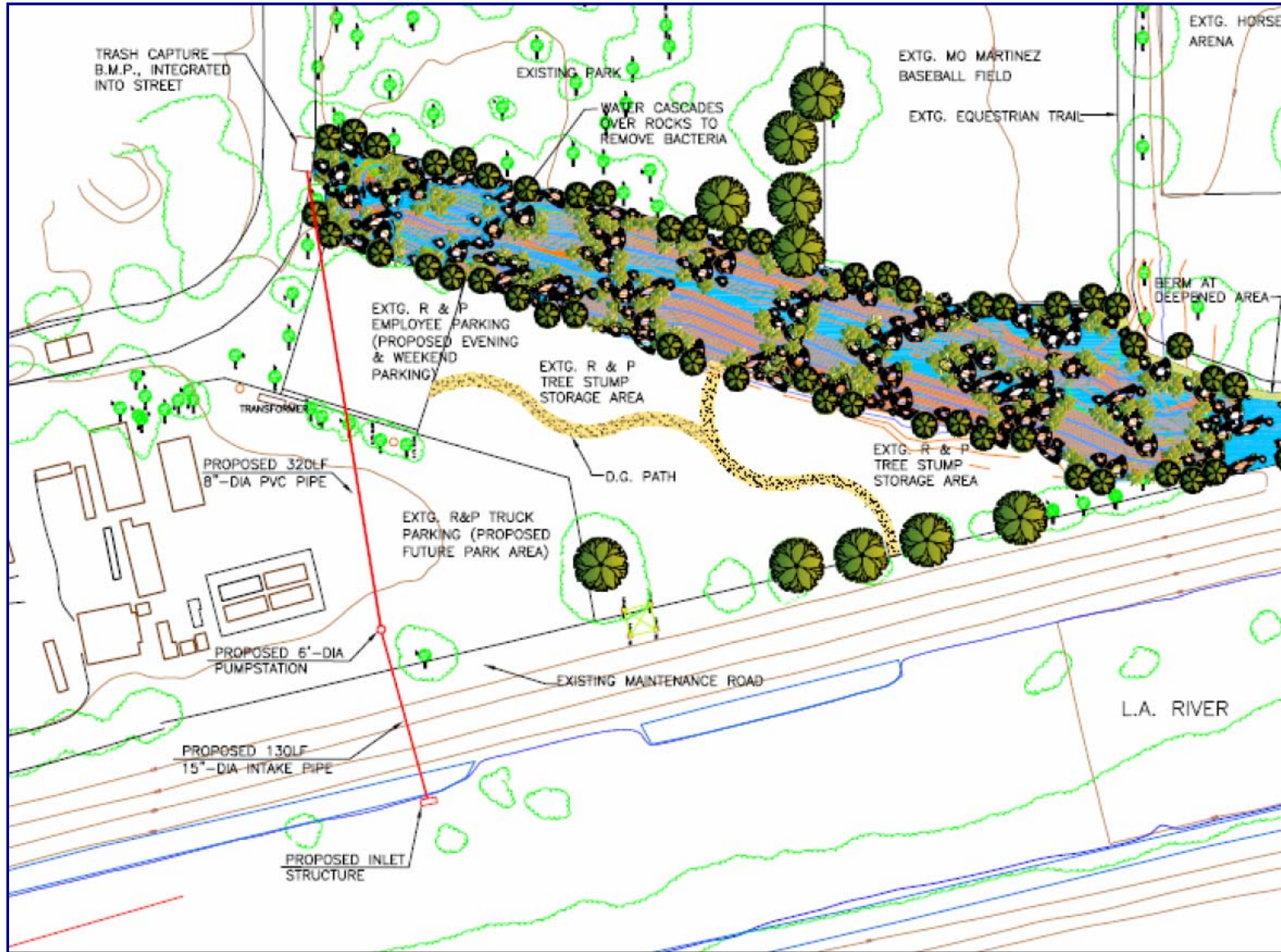
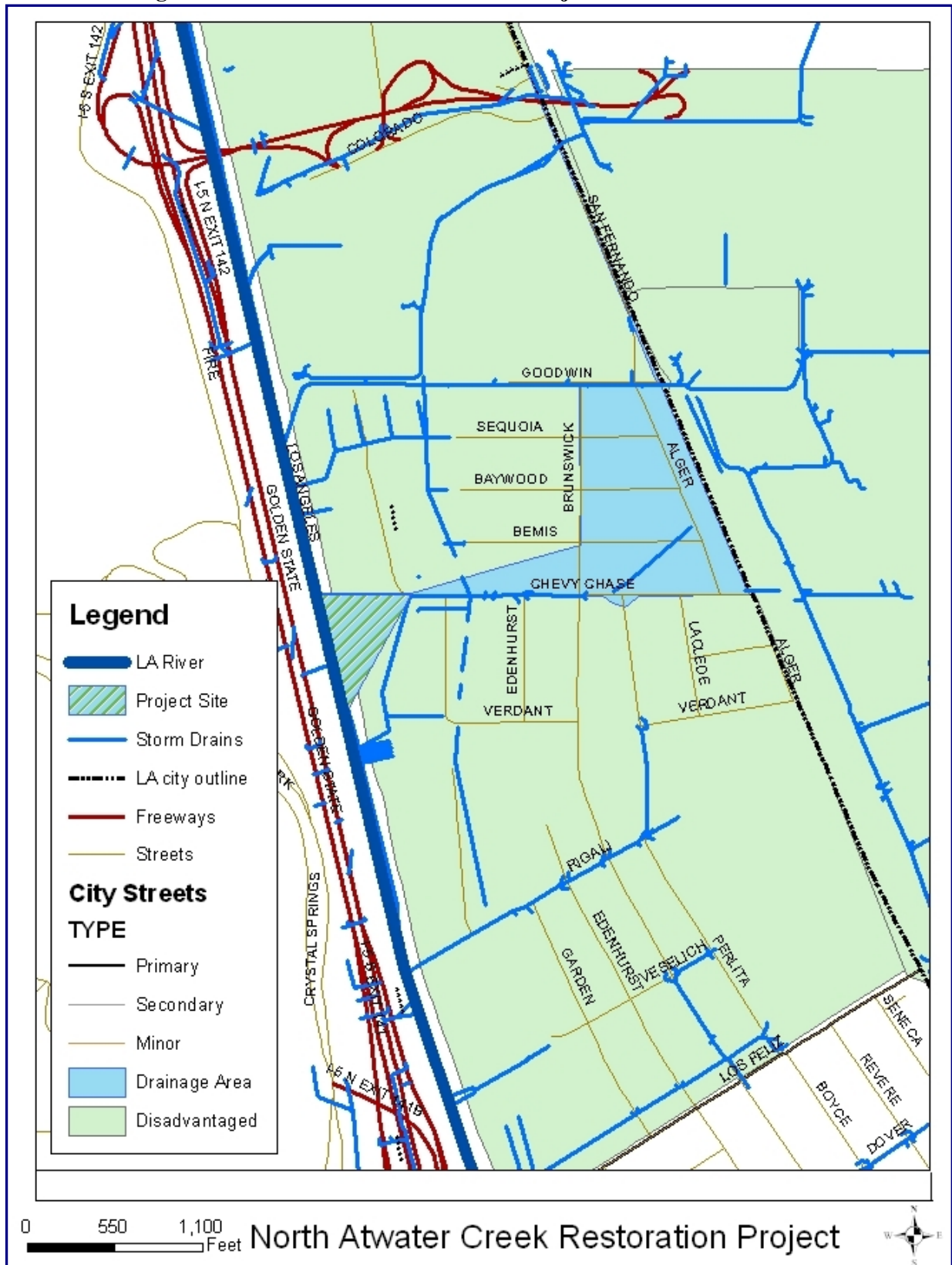


Figure 5-13: North Atwater Restoration Project Location and Facilities



## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration tasks related to the project will be performed by City of LA staff, which includes managerial, engineering, field and clerical personnel. The project administration activities include the following tasks:

- Seek and coordinate City of LA and State funding for the project
- Coordinate the approval of the various stages of the project by the City of LA's Board of Public Works, and the City of LA Council
- Package construction contract proposal, advertise contract and solicit bids
- Evaluate bids, select contractor, and award bid
- Track overall project milestones, finance and budgets, and resource allocation
- Maintain project documentation
- Administer project quality control plan
- Prepare quarterly progress reports and deliverables to the State
- Oversee stakeholder participation through out project
- Coordinate maintenance training

### (b) Land/Right-of-Way Acquisition

This project is located entirely within City of LA property so no land acquisition is required.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

The planning phase of the North Atwater Project will include meetings with stakeholders and other City of LA entities, such as the LADRP and City of LA Council Districts 1, 4 and 13. Community groups that may be involved in this stakeholder process include the Friends of Atwater Village, Atwater Village Neighborhood Council, Atwater Griffith Park Chamber of Commerce and the Friends of LA River. This process also includes an environmental educational outreach program. Stakeholders meetings will be conducted quarterly throughout the duration of the project.

Also, the planning phase will study the preferred implementation of the project and will examine project implementation alternatives. A Preliminary Study will be completed by July 2006 and the draft Preliminary Study was completed in June 2006 (see Attachment 8, Reference 7-1).

**Project Planning Submittals**

Preliminary Study

July 2006

*Design / Engineering*

The final (100%) Design for the project will be completed in April 2007. The design is broken down into 10%, 50%, 90%, and 100% submittals. These submittals are as follows:

**The 10% Design submittals will include:**

- Surveys of the project site area and determination of staging of personnel and equipment
- Geotechnical report (soil boring test)
- Preliminary environmental report
- Complete hydraulic and hydrologic analysis to estimate flows and determine flow path
- Updated preliminary project schedule
- Conceptual site plans and design of access ways, walkways, parking lot, benches, rest areas, and restroom facilities
- Updated cost estimate
- Research permits required for the project

**The 50% Design submittals will include:**

- Review of issues and comments received at 10% design completion.
- Updated cost estimate
- Environmental documentation
- Building and safety permits request
- Survey drawings
- Right-of-way maps and documentations
- Structural design and cost estimation for trash capturing system
- Pump sizing and flow calculation
- Landscape architectural layout of green areas, contour of the creek and wetlands
- Channel perimeter in-flow mitigation catch basin filters, improved utility access

**The 90% Design submittals will include:**

- Review of issues and comments received at 50% design completion
- Updated cost estimate
- Building and safety permits and all other permits
- Final survey drawings
- Final right-of-way maps and documentations
- Updated structural design and cost estimation for trash capturing system
- Incorporation of environmental requirements



## 7. North Atwater Creek Restoration Project

- Final design calculations

**The 100% Design (final) submittals will include:**

- Drawing details and sections
- Completed and organized set of plans and specifications
- Coordination of the locations and features of the structures, substructures, equipment, fixtures, piping, conduits, ducts, building members, building appurtenances and utilities such that there are no physical conflicts that could prevent their installation or proper use
- Complete, signed, and “As-Advertised” plans and specifications.

Design Submittals	
10% Design and Cost Estimate	Aug 2006
50% Design	Nov 2006
90% Design	Feb 2007
Final Construction Documents (100%)	Apr 2007

*Environmental Documentation*

An Initial Study Environmental Checklist Form (see Attachment 5-7) was prepared concurrently with this Proposal that indicates that any potential environmental impacts can be addressed with mitigation measures. This project is also exempt from the requirements of CEQA per Exemption Class 1(4) of the City of LA’s CEQA Guidelines, which provides that “installation of new equipment and /or industrial facilities involving negligible or no expansion of use is exempt from the requirements of CEQA if required for safety, health, the public convenience, or environmental control.”

Environmental Documentation Submittals	
Initial Study Checklist Form	Jun 2006
Notice of Exemption	Apr 2007

*Permit Acquisition*

The only permit required for this project by a non-City of LA agency relates to the modification that this project will have on the LA River. While USACE has jurisdiction over the LA River, it has an agreement with the LACFCD to have any permits related to modifications of the channel to be handled by LACFCD. The project involves the construction of a water intake from the bottom of the LA River. The permit will be submitted for approval after completion of 50% Design. Based on past interaction with the LACFCD, a permit will be issued within a period of two months.

It is anticipated that no permit will be required from the Los Angeles RWQCB regarding the discharge of the water from the stream to the LA River since the runoff is being taking from surface streets already draining into the river.

Permits	Purpose	Approval Date	Status
LACFCD Permit	To access the LA River and construct water intake	April 2007	After 50% Design



## 7. North Atwater Creek Restoration Project

**(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration tasks related to the project will be performed by City of LA staff, which includes managerial, engineering, field and clerical personnel. The project administration activities include the following tasks:

- Seek and coordinate City of LA and State funding for the project
- Coordinate the approval of the various stages of the project by the City of LA's Board of Public Works, and the City of LA Council
- Package construction contract proposal, advertise contract and solicit bids
- Evaluate bids, select contractor, and award bid
- Track overall project milestones, finance and budgets, and resource allocation
- Maintain project documentation
- Administer project quality control plan
- Prepare quarterly progress reports and deliverables to the State
- Oversee stakeholder participation through out project
- Coordinate maintenance training

#### Project Administration Submittals

Quarterly Progress Reports	Quarterly
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### (d) Construction / Implementation

A qualified contractor will construct this project. The completed construction contract documents will be advertised and bids will be solicited. The lowest responsible qualified bidder will be selected to construct this project. The construction of this project will consist of the following elements:

- **Runoff Diversion and Pre-Treatment** that will direct the runoff from a drainage area of 40 acres to the restore creek and wetland. This will include a debris capture system that will remove anthropogenic trash as well as sediment and vegetation debris. It is anticipated that a netting system will be selected for debris capture.
- **LA River Water Diversion** that involves the construction of an inlet structure, and a pump station that will divert water to the restored creek and wetlands to allow them to be sustained year-round.
- **Creation of the Wetland** that may involve grading and slope stabilization. The wetland will be created at the base of the creek and will be constructed to detain and naturally treat the water and provide habitat for the birds that utilize the LA River in this reach. Boulders will also be placed at strategic locations throughout the creek to create the wetland.

## 7. North Atwater Creek Restoration Project

- **Landscaping** where known exotic and invasive plants from the project area and the neighboring properties would be removed and replaced by planting of native vegetation capable of naturalizing (especially in riparian areas) or reseeding from park into channel areas. Plantings will include trees, shrubs, lawn, groundcover, and vines. Vines will be useful in preventing graffiti on common perimeter block walls and as forager for the fauna. It is expected that minimal irrigation runoff from bank plantings may be used to extend wet season habitat. All plantings shall be irrigated either temporarily, or permanently as required to provide a green planted barrier for fire control and public use.
- **Park Features** will include trail edge timber barrier between trails and channel that protects nesting and foraging habitat from dust, debris, canines, and human traffic. The park area will also incorporate educational signage. Visitor paths will be constructed using decomposed granite.
- **Equestrian Facility BMPs** will address the horse-related pollution from the stables located adjacent to the project site. These BMPs may include installation of vegetated swales around the facility, adsorption pits, manure disposal management, and re-routing of drainage.

Project construction will commence once the contractor has been selected and a Notice to Proceed has been issued. The construction will be deemed complete by City of LA staff upon the completion of the final Construction Inspection Checklist.

Construction Submittals	
Notice to Proceed	Dec 1, 2007
Construction Inspection Checklist	Dec 2008

### (e) Environmental Compliance / Mitigation/ Enhancement

A primary goal of this task is to ensure that construction activity is consistent with regulatory requirements. This project will require the preparation of a SWPPP for the duration of the construction. This will involve both the project administrator and the construction contractor to have proper SWPPP certified training, a thorough SWPP on site and its proper implementation. This includes details on planning, staging, storing, transporting, sorting and disposal of materials removed from the park area during construction complying with all environmental standards. Maximum effort will be made to identify and recycle all recyclables.

Efforts will be made as part of this project to maximize its habitat benefit. A meeting with U.S. Fish and Wildlife Service (USFWS) at the project site to discuss the project and its relationship to any populations of listed species known or considered potentially present will be scheduled. The purpose of the meeting is to optimize the habitat benefit of the proposed project. No permit is required from USFWS.

Finally, construction will be carried out between the hours of 7:00 a.m. and 3:30 p.m. to comply with the Mayors ordinance to mitigate the effects of noise, light traffic and other environmentally detrimental factors on the neighborhood.

### (f) Construction Administration

Construction management and engineering services during construction activities will be performed by the City of LA. These efforts include:

- Identify and set up cost tracking mechanisms with related work orders.
- Complete Bid and Award Process, provide notice to proceed construction, provide neighborhood notification of construction project including its funding, duration, goals and objectives of the project
- Track the quality of the construction project by conducting periodic inspections

## 7. North Atwater Creek Restoration Project

- Coordinate construction activities with all stakeholders by holding periodic meetings, reviewing construction progress and providing timely feedback.
- Identify lead inspector from the Bureau of Contract Administration, establish regular communications with the person
- Provide periodic updates to stakeholders through e-mail, mailings, and neighborhood meetings
- Provide information for the quarterly reporting to the State
- Complete project, follow up with reports, auditing spare parts and provide training for operations/maintenance personnel
- Close out of construction contract

**(g) Other**

A MP and QAPP will be prepared prior to start of construction, which is expected by December 1, 2007.

Other Submittals	
Monitoring Plan	Dec 2007
Quality Assurance Project Plan	Dec 2007

## Discussion of Standards and Merits

### *Standards*

Construction material that will be used in the project shall conform to the standards and applicable codes of the State of California. This is in addition to construction materials as stated in the “Standard Specifications for Public Works Construction, 2003 Edition”. All equipment furnished and used by the contractor shall comply with City of LA Building and Safety construction codes, City of LA Fire Codes, CAL OSHA Title 8 codes for Industrial Safety. Standards that relate to specific knowledge, training, operations, and license to operate the equipment shall be specified in the contract documents. Finally, construction equipment shall comply with the latest Rules and Regulations of the SCAQMD.

### *Merits*

The project will be implemented in accordance with established professional standards. The leading construction material for the project will consist of concrete structures and mechanical equipment. These materials will be used consistent with established City of LA codes and established standards. The restoration of the creek and the establishment of the wetlands will be consistent with established restoration practices. Finally, established engineering practices will be used to determine the sizing and selection of materials for all new constructed facilities.

## Coordination with Regional Agencies and State

The North Atwater Creek Restoration Project is a regional project that will be coordinated in conjunction with the LACFCD and the Los Angeles RWQCB. Part of the coordination with LACDPW will involve the permit related to access to the LA River. The coordination with the Los Angeles RWQCB will be related to their approval to return the creek flow to the LA River and share information regarding the project with other regional entities. The project will also involve coordination between various City departments, including the Departments of Public Works, Recreation and Parks, Environmental Affairs, and City Council District 13.

## 8. Pacoima Wash Greenway

### Project: 8<sup>th</sup> Street Park

## Detailed Project Description

### Project Need

Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park addresses multiple needs within the project area on both a local and region scale. The project provides public access to new recreational opportunities and open space in an under-served community and addresses TMDL for storm water by capturing, treating, and restoring runoff from surrounding communities. Also, this project is the first and most important step to implement the Pacoima Greenway Master Plan.

### Project Description

Many cities are now faced with the task of developing new strategies to deal with storm water pollution originating in neighborhoods and industrial areas along streams and existing storm water channels in order to comply with new regulatory standards and to provide a more sustainable urban environment. In the past, it has been common practice to route storm water from stream-adjacent neighborhoods directly into the stream through storm drains and overflow structures along the channel right-of-way, often where streets dead-end into the channel.

The planned Pacoima Wash Greenway, is a 3-mile long corridor of natural open space that will protect the land and water resources of the watershed. One of the goals of the greenway is to capture all storm water runoff from stream channel-adjacent neighborhoods for treatment and infiltration in BMPs integrated into a series of parks along the Pacoima Wash channel.

The greenway will extend from the Angeles National Forest and the Rim of the Valley Trail Corridor to the communities of the northeast San Fernando Valley. Subject of this proposal is a small project component of the larger plan. The project site is located on the north side of the Pacoima Wash between Foothill Blvd. and 8<sup>th</sup> Street in the City of San Fernando. It is proposed to convert approximately 3 acres of undeveloped land into a natural park that collects, treats and infiltrates residential runoff onsite.

This component will be done in close cooperation between the City of San Fernando and the Mountains Recreation and Conservation Authority (MRCA). As a first step, the MRCA purchased the property on April 1, 2005. This project is the first in a series of acquisitions and improvements for the planned Pacoima Wash Greenway.

Pacoima Wash Greenway Project was explored when the city of San Fernando commissioned a planning study by the Cal Poly Pomona Landscape Architecture Department, 606 Studio to develop a comprehensive analysis and master plan for the Pacoima wash green way. The city has adopted this plan and approved the formation of the Pacoima Wash Greenway/Watershed Restoration Ad Hoc Committee (Ad Hoc Committee). The committee prioritizes the city's effort to revitalize and restore the community and rivers while also bringing in public agencies and nonprofits to facilitate and guide their planning and zoning efforts. This focus redefines the image of the channel and considers the function of the riparian corridors to develop community assets and increase habitat. Furthermore, this project demonstrates how TMDL regulation compliance can be achieved through open space and recreation development.

The property is currently vacant and does not contribute to the community's quality of life. During development of the Master Plan, facilitators found that many Los Angeles and San Fernando residents



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**8. Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park**

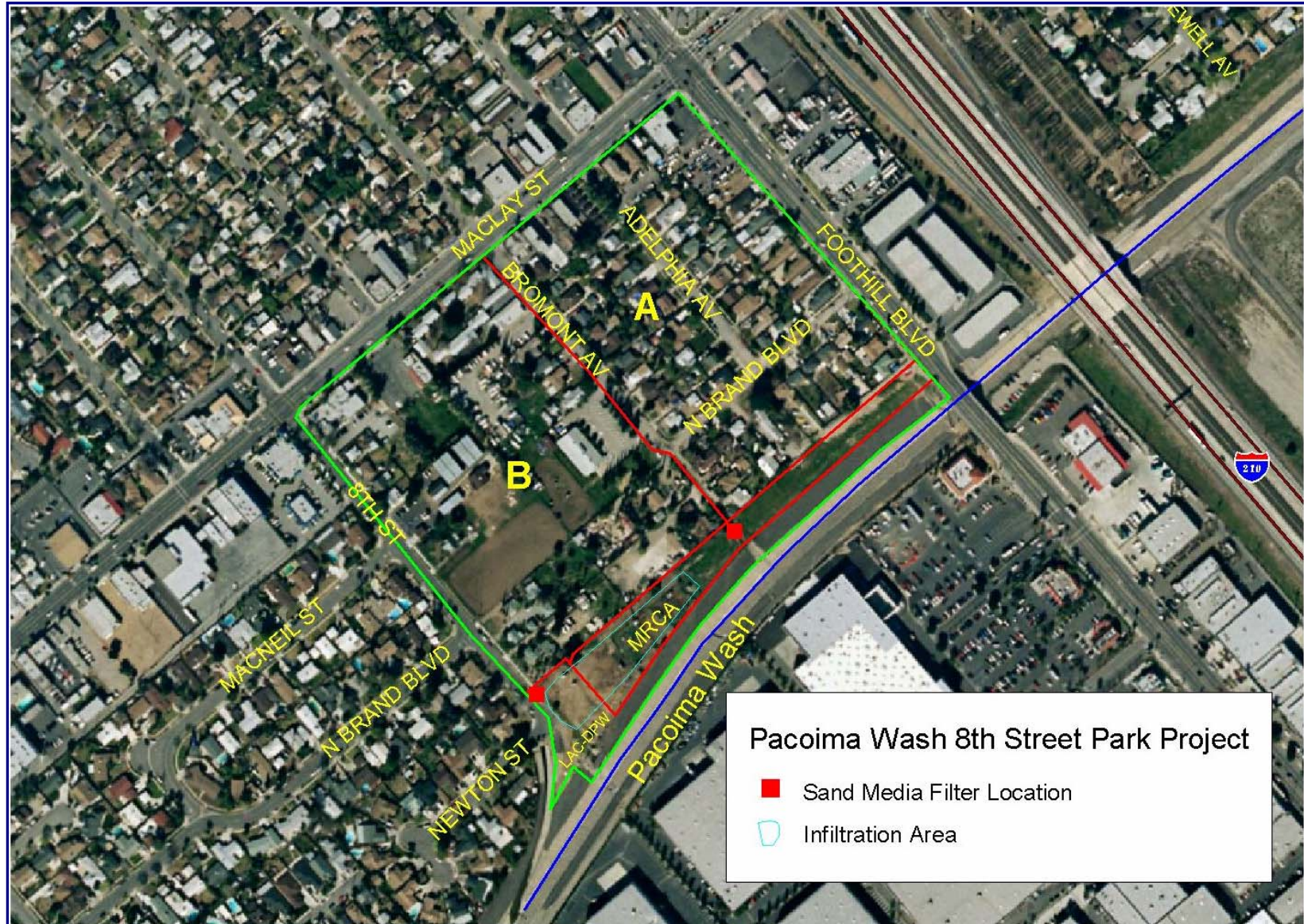
perceive that the Pacoima Wash divides communities and neighborhoods. Public perception of Pacoima Wash now is of an unsafe, neglected place frequented by homeless, and the site of illegal activities. Creating a multi-benefit park will work to address these community needs as well as local and regional water quality issues. The community has been engaged in the planning process and has expressed enthusiasm for this project as it will beautify and enhance the environmental quality of their neighborhood contributing to regional improvement efforts.

This project is the first in a series of proposed projects for the Pacoima Wash Greenway. With the implementation of the Pacoima Wash: 8<sup>th</sup> Street Project, this larger planning effort is moving from the conceptual design development into implementation and buildable projects. Therefore it is critical that this project is a successful demonstration of a multiple benefit project. This park is the springboard for making this larger plan a reality.

## Project Map

The project site map, **Figure 5-14**, delineates in red the property owned by the MRCA and the southern adjacent LACDPW easement. The neighborhood drainage areas are marked as A and B together totaling an area of 33 acres. The red squares in the center and at the southern end of the project area identify the initial points of runoff collection where water will be screened for trash and sediments will be trapped. The light blue area is the approximate location of where the sand infiltration bed will be located to allow the water to be filtered and percolate. This aerial photo relays this site the proximity of the project area to the wash and enforces it as an integral part of the Pacoima Wash.

Figure 5-14: Pacoima Wash / 8<sup>th</sup> Street Park Project Map





## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

MRCA staff will perform project administration over the life of the project, estimated at 8 hours a week. The duties performed will include:

- Provide for advertisement of contract.
- Distribute bid invitation and issue instructions to potential bidders.
- Evaluate bids and select lowest responsible bidder.
- Check that bonding requirements have been met.
- Let contracts and obtain procurement of services.
- Issue Notice to Proceed after all requirements have been met.
- Administer project finances.
- Schedule and coordinate construction meetings.
- Documentation of meetings.
- Maintain contract escrow bid documents.
- Control project records and document distribution.
- Handle basic administration, planning, meetings, actions and record keeping.
- Identify and coordinate stakeholders and their various roles and needs.
- Provide additional support for construction administration.
- Ensure and maintain proper labor practices and wage rates.

### (b) Land Purchase / Easement

Acquisition of the project site was completed on April 1, 2005. Therefore, no additional effort to acquire land for the project is required.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

Stakeholder outreach accomplished:

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**8. Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park**

- 2003: the City of San Fernando and City of Los Angeles commissioned a planning study by the Landscape Architecture Program of Cal Poly Pomona (“the 606 Studio”) to further design aspects of the envisioned greenway along Pacoima Wash.
- May 5, 2003: the City of San Fernando City Council approved the formation of the Ad Hoc Committee.
- April 28, 2004: Santa Monica Mountains Conservancy and MRCA presented their potential role on the Pacoima Wash at the final presentation of work done by Cal Poly Pomona students in the Department of Landscape architecture. Their work has been published as the Pacoima Wash Greenway Master Plan.
- June 18, 2004: MRCA met with Los Angeles Unified School District (LAUSD) Board Member Julie Kornstein, LAUSD facilities staff, and Pacoima Beautiful Project executive director to discuss plans for the Pacoima Wash Greenway.
- April 20, 2005: MRCA presented the Pacoima Wash Greenway Plan and plans for the 8<sup>th</sup> Street Property to Pacoima Beautiful Project graduate students working on the Pacoima Wash
- May 16, 2005: The Council adopted a resolution in support of grant application to DWR and State Water Resources and SWRCB to obtain a grant for the Pacoima Wash Greenway 8<sup>th</sup> Street Park.
- June 23, 2005: MRCA with City of San Fernando and assembly member Cindy Montanez, hosted an 8<sup>th</sup> Street Park community meeting at Morningside Elementary School.
- August 31, 2005: the Ad Hoc Committee met to discuss other potential partnership opportunities with the MRCA staff.

MRCA conducted or participated in the following outreach meetings for Pacoima Wash Greenway:

- Met with LAUSD staff to discuss potential partnership on several project along the Pacoima Wash
- MRCA met with Assembly member Cindy Montanez to provide an update on 8th Street Project.
- MRCA presented project plan to local residents @ San Fernando Neighborhood Coalition Meeting
- MRCA staff met with Senator Richard Alarcon’s staff to provide project update on 8th Street Project and on other project along the Wash
- MRCA staff met with Councilman Alex Padilla’s staff to provide project update on 8th Street Project and on other project along the Wash
- Site Visit with LACDPW
- Met with City of San Fernando’s Public Works Director to refine project
- MRCA conducted an 8th Street Park Community Survey
- Worked with Assembly member Cindy Montanez’s Office to send out over 300 community meeting flyers to community members and community-based organizations.

MRCA plans for additional outreach:

- Site community meeting schedule with stakeholders and residents for late May 2006.
- Groundbreaking ceremony with local elected officials, residents and community stakeholders in September 2006
- Design consultants will present final design to City of San Fernando City Council in December 2006

Sign-in sheets for select meetings and the community survey are included in Appendix 5-8.

8. Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park

A Conceptual Hydrologic Layout (Attachment 8, Reference 8-2) for the 8<sup>th</sup> Street Park was prepared to analyze and summarize existing hydrologic conditions and to perform preliminary surface runoff calculations for the project area and proposed hydrologic scheme appropriate for the size of the proposed park. The goal of this study was to identify a balance between existing and future hydrologic function and design feature capabilities. The study has resulted in a hydrologic scheme with technical recommendations for BMPs. This study is relevant to this project because it describes how to deal with urban runoff aesthetically, in natural environment that provides recreational opportunities for community members and habitat for wildlife. MRCA completed the Conceptual Hydrologic Layout on January 31, 2006.

Planning Submittals	
Conceptual Hydrologic Layout	Jan 2006
Community Survey Form, Response Summary & Survey Results	Jun 2006
Meeting Sign-In Sheets	Jun 2004 - Jun 2005

*Design/ Engineering*

Survey and site analysis were conducted by Soloff Surveying and Consulting and were completed in June 2005. An additional survey will be conducted to include an area of the project that was not initially surveyed.

MRCA contracted a consultant (BlueGreen) to develop construction documents, design details, and BMPs. Engineering services have been contracted through BlueGreen for design curb/inlet/catch basin, stormceptors and sediment traps and overflow channel from infiltration basin. The design contract includes the following tasks (Appendix 5-8):

- Public Outreach
- Site Improvement Plan
- Demo & Site Prep Plan
- Grading Plan
- Planting Plan
- Irrigation Plan
- Hardscape Plan
- Landscape Construction Details
- Landscape Specifications
- BMP Plans

The preliminary grading plan was completed by BlueGreen in May 2006 (Appendix 5-8). The plan is designed to divert and reduce peak flows from adjacent residential areas through project site BMPs before entering Pacoima Wash. Also, the planting palette has been identified and planting plan is in development stage.

MRCA and BlueGreen have met with City of San Fernando's City Engineer to discuss and prioritize the proposed project BMPs. BMPs such as the vegetated bioswale that mimics a natural stream and links water capture points to infiltration areas are being designed in detail.



8. Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park

Ongoing design efforts include:

- Design meetings are regularly scheduled to meet with consultants and other stakeholders.
- Collecting and distributing necessary information to complete design and planning efforts.
- Continue to present project design to various stakeholder and professionals in related fields.

Design / Engineering Submittals	
Hydraulic Layout	Jan 2006
Landscape Design	Jun 2006
Final Design	Oct 2006

### *Environmental Documentation*

The CEQA process for the Pacoima Wash 8<sup>th</sup> Street Park is complete and included preparation of an IS and MND. The IS was completed on April 15, 2005 and the MRCA Governing Board adopted the MND on June 1, 2005 following the public review period of 30 days. Environmental documentation is included in Appendix 5-8.

Environmental Documentation Submittals	
Initial Study	Apr 2005
Mitigated Negative Declaration	Jun 2005

### *Permits*

The permitting process will be initiated with the completion of the Preliminary Design and will be conducted by MRCA. MRCA conducted a preliminary meeting with City of San Fernando's City Engineer for pre-approval of proposed BMPs and for alignment with city maintenance capabilities and requirements. MRCA also held a meeting with LACDPW to present project and to better understand County standards for projects in their jurisdiction. Expected completion date for engineering and permitting process is October 2006.

Permitting Submittals	Purpose	Approval Date	Status
City of San Fernando A Permit	Work within a public easement	Oct 2006	Conceptual approval
City of San Fernando B Permit	Plan check for extensive public works improvements		Conceptual approval
LACFCD Review	LACFCD approval		Submit in July 2006
USACE Review	USACE approval		Submit in July 2006

A City of San Fernando "A" Permit is issued for the repair, construction or reconstruction of curbs, sidewalks, driveway approaches or gutters, and work appurtenant to the foregoing, or work within a public easement, where the work contemplated is limited in extent and can be constructed to match existing grades without a survey or engineered plans. "A" Permits are often issued in conjunction with sewer permits, which require excavation in a public street. Driveways and sidewalks involving the relocation of water meter and gas valve boxes, street light and traffic signal conduit and pull boxes and

8. Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park

parking meters, require coordination with the appropriate agencies. City of San Fernando will allow for minor street construction in a public right-of-way.

A City of San Fernando "B" Permit (Plan Check Only) is issued for extensive public works improvements including the widening of streets and alleys, the changing of existing street grade, construction of bridges, retaining walls, and the installation of sewer, storm drains, street lighting, and traffic signals. Construction plans are usually required which must be signed by a California licensed Civil and/or Electrical and/or Traffic Engineer. City of San Fernando plan check requires:

- Construction material take off for bond estimate
- Two sets of plans
- One copy of required improvement conditions by city planning department
- Name, address and phone number of current owner of property
- Copy of building application
- \$1000 check to city pre design fee deposit (waived)

The LACFCD will review the proposed work to endure that it will not adversely affect their interests, such as hydraulic and hydrology design, structural integrity, maintenance standard, and property rights. Finally, USACE will review and approve projects plans

#### (d) Construction / Implementation

Initial site improvements to remove debris and exotic plant species were conducted by Triple R Construction in December 2005 and a temporary fence was installed to delineate and secure property. Construction will be initiated once the Final Design is complete and all proper permits are in place. In May 2006, a second round of removal efforts occurred.

#### (g) Other Costs

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007
Quality Assurance Project Plan	Feb 2007
Monitoring Plan	Feb 2007

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

MRCA staff will perform project administration over the life of the project, estimated at 8 hours a week. The duties performed will include:

- Provide for advertisement of contract.
- Distribute bid invitation and issue instructions to potential bidders.
- Evaluate bids and select lowest responsible bidder.
- Check that bonding requirements have been met.
- Let contracts and obtain procurement of services.
- Issue Notice to Proceed after all requirements have been met.
- Administer project finances.
- Schedule and coordinate construction meetings.
- Documentation of meetings.
- Maintain contract escrow bid documents.
- Control project records and document distribution.
- Handle basic administration, planning, meetings, actions and record keeping.
- Identify and coordinate stakeholders and their various roles and needs.
- Provide additional support for construction administration.
- Ensure and maintain proper labor practices and wage rates.

#### Project Administration Submittals

Quarterly Progress Reports	Quarterly
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### (d) Construction / Implementation

Construction will be performed by a General Contractor that will be selected after public bid process. The construction processes is expected to take 9 to 12 months before completion, this will include the storm water components. The project will include the construction of two “Placitas” equipped with grating and underground stormceptors necessary to filter out trash and sediment from residential runoff. A vegetated bio-swale stream will be constructed to further filter the water and to transport the runoff across the park to a sand media infiltration basin. A bridge will be constructed for pedestrian and emergency traffic over the bio-swale stream. Decomposed granite paths, stone and tile work and irrigation will be also be constructed throughout the park. Other park amenities to be included in construction are fencing, decorative benches, an arbor and plantings.

### (e) Environmental Compliance / Mitigation / Enhancement

Per the adopted MND, should conditions potentially affecting cultural resources, noise and or air quality be encountered, the defined mitigation measures will be implemented. Additionally, once construction documents are completed, a meeting will be held with LACFCD to review project.

Should construction or any other related activity cause an increase in airborne dust and or sediment runoff, appropriate mitigation measures will be implemented to ensure that there is no transport of sediment and construction materials off the project site.

### (f) Construction Administration

BlueGreen is under contract to provide construction administration to ensure construction does not deviate from approved design and MRCA staff will provide general administration of contractor and consultants. Typically, the chief landscape architect from MRCA and the chief of construction from MRCA are involved along with project manager from MRCA. The MRCA construction administration tasks that will be conducted include:

- Scheduling and management of a pre-construction meeting with contractor and all involved parties.
- Arranging for a site survey to be conducted and making this document available to contractor.
- Requesting and managing a construction schedule provided by contractor.
- Documenting, processing or forwarding change orders.
- Checking that work is performed according to contract documents.
- Tracking work tasks and deliverables on the project's path.
- Performing or reviewing progress updates and reports.
- Tracking work completion for payments
- Keeping track of work performed on "time and materials" basis.
- Identifying any ongoing operational constraints.
- Keeping track of site security issues.
- Keeping track of construction mitigation issues.
- Keeping track of health and safety issues.
- Verifying any intermediate, mechanical and contract completion milestones.
- Tracking extra work claims and credit.

## Discussion of Standards and Merits

The 60% Design will be completed by July 2006 and will be reviewed by the MRCA Landscape Architecture Division to ensure that they adhere to Federal, State and local standards, such as Safe Parks and the American with Disabilities Act. All park amenities will be fully compliant with the State Architectural Guidelines for Public Places.

## Coordination with Regional Agencies and State

The City of San Fernando is working in partnership with MRCA. MRCA has a drafted a letter of support that describes their role of future site maintenance and water quality monitoring. San Fernando is working closely with the MRCA to move this project into the implementation phase.

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**8. Pacoima Wash Greenway Project: 8<sup>th</sup> Street Park**

The Santa Monica Mountains Conservancy is actively supporting the development of this park and its BMP components and has provided funding for the acquisition of the project site property. Santa Monica Mountains Conservancy Land Acquisition Work Program 2000 is consistent with the guiding objectives and principles of this project.

LACFCD, who has jurisdiction over Pacoima Wash, has met with the MRCA on site to discuss the project components.



## 9. San Gabriel Valley Riparian Habitat *Arundo* Removal Project

### Detailed Project Description

#### Project Need

The San Gabriel Valley Riparian Habitat Invasive Weed Control project will remove 24 net acres of *Arundo donax*, a non-native invasive plant to increase surface water flow, improve groundwater percolation, prevent obstruction of flood control channels, preserve and restore rare native riparian habitat, reduce fire hazard, preserve recreational trails, and prevent expansion of this species throughout the Whittier Narrows basin.

#### Project Description

The San Gabriel Valley Riparian Habitat *Arundo* Removal Project will restore natural riparian habitat and increase surface water flow to the Rio Hondo percolation basins in the San Gabriel Valley. The proposed project will remove 24 net acres of *Arundo donax* (*Arundo* or giant reed), which is classified Federally and by California as a noxious weed. The following description is taken from Noxious Wildland Weeds of California [Attachment 8, Reference 9-3]:

*Arundo* displaces native plants and associated wildlife species as a consequence of the massive stands it forms. Several special status species are associated with California's semi-arid riparian zones, including Least Bell's vireo, Southwestern willow flycatcher and Yellow-billed cuckoo, all of which are negatively affected by the replacement of willow/cottonwood riparian vegetation by Giant reed. Unlike native riparian plants, *Arundo* provides little shading to the in-stream habitat, leading to increased water temperatures and reduced habitat quality for aquatic wildlife. At risk are protected species like Arroyo toad, Red-legged frog, Western pond turtle, Santa Ana sucker, Arroyo chub, Unarmored three-spined stickleback, Tidewater goby and Southern steelhead trout, among others.

*Arundo* is also suspected of altering hydrological regimes and reducing groundwater availability by transpiring large amounts of water from semi-arid aquifers. It alters channel morphology by retaining sediments and constricting flows, and in some cases may reduce stream navigability. Dense growths present fire hazards, often near urbanized areas, more than doubling the available fuel for wildfires and promoting post-fire regeneration of even greater quantities of Giant reed. Uprooted plants also pose clean-up problems when deposited on banks or in downstream estuaries and during floods create hazards where trapped behind bridges and other structures.

Removal will occur at an average cost of \$7,000 per net acre at three locations:

- San Gabriel River (at Whittier Narrows) [10 acres]
- Crossover Channel (North side by Whittier Narrows Dam and east of Rosemead Blvd) [7 acres]
- Rio Hondo River (at Whittier Narrows and north of San Gabriel Blvd) [7 acres]

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## 9. San Gabriel Valley Riparian Habitat *Arundo* Removal Project

The Project is a continuation of larger campaign to eradicate all *Arundo* from urban riparian areas of San Gabriel Valley. Since 1997, over ten projects have removed *Arundo* throughout the Rio Hondo and San Gabriel River watersheds upstream of Whittier Narrows flood control basin and from parts of Whittier Narrows basin. *Arundo* control projects totaling about 95 net acres in San Gabriel Valley have been funded and/or managed by numerous organizations, including USACE; LACDPW; USDA, Angeles National Forest; Azusa Rock Co/Vulcan Materials; Los Angeles Conservation Corps for City of Industry; Glenn Lukos Associations for City of La Habra; Center for Natural Lands Management for Los Angeles/Long Beach Harbors.

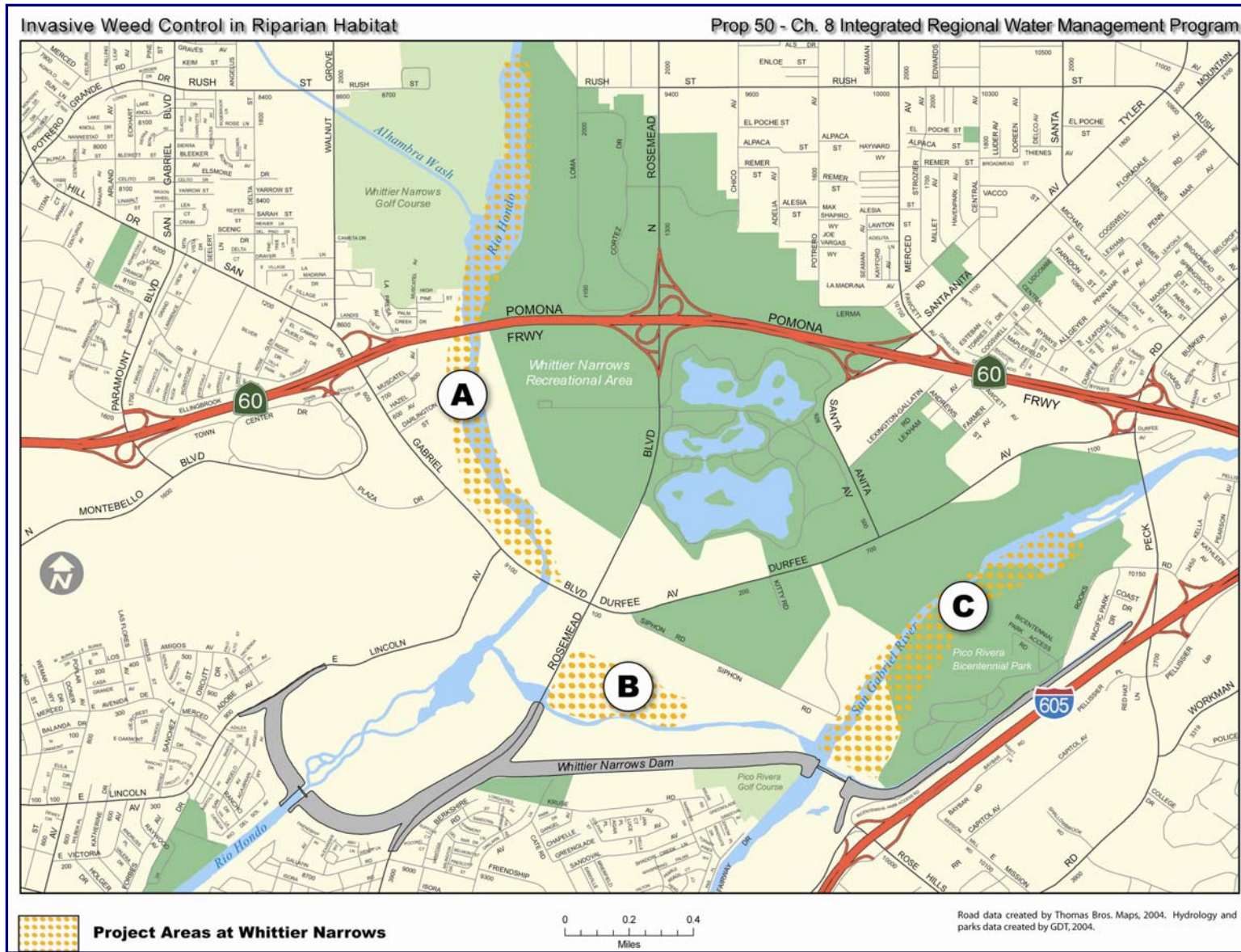
The proposed project of 24 net acres will complete protection of high-quality riparian habitat remaining at Whittier Narrows north of San Gabriel Blvd. and east of Rosemead Blvd. These targeted areas within Whittier Narrows basin do not qualify for funding of *Arundo* removal for the purpose of clearing flood control channels, as did most previously cleared *Arundo* infestations higher in the watershed.

### Project Map

Project location and facilities are illustrate in **Figure 5-15** and shows the location of the three proposed *Arundo* control areas in relation to the Rio Hondo River and San Gabriel River upstream of Whittier Narrows Dam. The disadvantaged communities of South El Monte and Rosemead are adjacent to the north side of the project areas.

9. San Gabriel Valley Riparian Habitat *Arundo* Removal Project

Figure 5-15: San Gabriel Valley *Arundo* Removal Project Map



## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration will be conducted by Los Angeles & San Gabriel Rivers Watershed Council (LASGRWC) and includes contracting for *Arundo* removal and coordination with land owners or managers [e.g. USACE or Los Angeles County Department of Parks and Recreation (LACDPR)]. LASGRWC has contracted Riparian Repairs to provide project administration services as needed.

### (b) Land Purchase / Easement

Acquisition of land or right-of-way is not required because Whittier Narrows basin is owned by USACE and partly managed by LACDPR. Necessary permits for access have been obtained.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

Mapping of two of three *Arundo* populations at Whittier Narrows was conducted by Bill Neill of Riparian Repairs in 2002 and 2004 and detail mapping used aerial photographs. Final mapping is posted at LASGRWC website (<http://www.lasgrwc.org/exotics.html>). The previous *Arundo* mapping was paid for by previous funding but the old maps warrant updating and a third area needs to be mapped based on recent aerial photos. The additional *Arundo* mapping will be complete by May 1, 2007.

#### *Design / Engineering*

Biomass reduction and herbicide treatment of *Arundo* will be applied using procedures proven to be economical and effective in previous riparian habitat restoration work.

#### *Environmental Documentation*

USACE issued a Categorical Exclusion in February 2002 for *Arundo* and non-native trees removal at Whittier Narrows Basin, Sepulveda Basin, and Los Angeles River at Glendale narrows. The Categorical Exclusion was renewed in May 2006 and will add the Santa Fe Dam Basin and renew the term.

Environmental Documentation Submittals	
Categorical Exclusion	Original - Feb 2002 Renewed - May 2006

9. San Gabriel Valley Riparian Habitat *Arundo* Removal Project*Permit Acquisition*

CDFG issued Streambed Alteration Agreement 5-2002-0355 in October 2002 and renewed the agreement in May 2006 for projects in the San Gabriel Valley to cover a broad range of exotic plant removal activities. RWQCB 401 permit and USACE 404 permit are not required because the project does not negatively impact water quality or involve stream channel excavation (see Appendix 5-9).

Permitting Submittal	Purpose	Approval Date
CDFG Streambed Alteration Agreement	Regulates the impact of non-native exotic plant species removal on wildlife, such as ensuring the removal activities do not disturb nesting birds.	- Original: Oct 2002 - Renewed: May 2006



## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration is conducted by LASGRWC and includes contracting for *Arundo* removal and coordination with land owners or managers (e.g. USACE or LACDPR). LASGRWC has contracted Riparian Repairs to provide project administration services as needed.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (d) Construction / Implementation

Biomass reduction and herbicide treatment of *Arundo* will be applied by experienced contractors using procedures proven to be economical and effective in previous riparian habitat restoration work.

Contractors for biomass reduction will be selected based on past performance and availability of tractor mowers on a low-cost basis. Also, the Los Angeles Conservation Corps (LACC) will be employed for chainsaw work, as needed. As on-site project manager, Riparian Repairs, will be responsible for mowing and LACC crew supervision and for herbicide application.

*Arundo* will be removed by mowing/mulching tractors and herbicide application. Project implementation will consist of mowing/mulching 10 to 15 acres per year during 2007 and 2008 followed by herbicide treatment of *Arundo* resprouts from 2009-2011 until eradicated.

### (e) Environmental Compliance / Mitigation / Enhancement

The proposed project does not require mitigation because it will enhance riparian habitat. The proposed project will comply with environmental regulations specified by the CDFG Streambed Alteration Agreement, such as surveying for bird nests prior to tractor operation during nesting season.

### (f) Construction Administration

Riparian Repairs, as on-site project manager, will supervise contractors and report progress to LASGRWC.

Construction Administration Submittals	
Quarterly Progress Reports	Quarterly

## Discussion of Standards and Merits

### *Standards*

*Arundo* biomass removal and herbicide treatment will be applied by experienced contractors using procedures proven to be economical and effective in previous riparian habitat restoration work. The principal contractor, Riparian Repairs, has 6 years of professional experience. All contractors will be selected based on their proven ability to use health and safety best practices and follow required protocols when applying herbicides and using mechanical equipment. Regulations governing herbicide applications are specified by the California Dept. of Pesticide and enforced by the Los Angeles County Agricultural Commissioner.

### *Merits*

Economical, effective *Arundo* control requires herbicide application, either by foliar spraying or stem injection without biomass reduction, or in combination with manual cutting or tractor mowing/mulching. Large *Arundo* stands require tractor mowing to provide access, then are allowed to resprout for 4-6 weeks, and the young resprouts are foliar sprayed with herbicide that translocates to the root system. Typically Rodeo or Aquamaster formulations of glyphosate are applied to *Arundo*, but the newly registered aquatic version of imazapyr named Habitat herbicide is also effective. Smaller *Arundo* clumps and areas inaccessible to tractors can be foliar sprayed with the dead stalks left standing to decompose in place. Stem injection and manual removal using loppers or chainsaws is feasible only on small clumps that are intergrown with native trees.

## Coordination with Regional Agencies and State

LASGRWC is coordinating access to project sites with USACE and LACDPR. The coordination has occurred for previous projects the necessary permits for access for this project have been obtained.

# 10. Solstice Creek Southern Steelhead Habitat Restoration Project

## Detailed Project Description

### Project Need

The Solstice Creek Steelhead Habitat Restoration Plan was undertaken in order to remove barriers to steelhead migration within the creek, restore riparian habitat, and improve water quality in the Solstice Creek watershed. The Solstice Creek Steelhead Habitat Restoration Project will complete the final three of eight phases of the restoration plan for endangered southern steelhead.

### Project Description

Southern Steelhead trout are a Federally endangered species with extremely limited habitat availability. In order to restore this species, existing habitat must be improved and expanded on. Solstice Creek has been identified as prime steelhead habitat due to the high water quality, amount of public land within the watershed, and free flowing nature of the creek (undimmed).

This project is part of a larger National Park Service (NPS) project to restore Solstice Creek, the Solstice Creek Steelhead Restoration Plan. This project seeks to restore Solstice Creek to a more natural condition through removal of debris, sediment, invasive species, and creek barriers. The restored riparian areas will provide habitat for Federally endangered Southern Steelhead Trout. This particular project focuses on restoration of side drainages of Solstice creek and areas impacting the riparian zone through sediment and invasive species inputs. These areas are currently degraded by the presence of debris (old farming equipment) and non-native invasive plant species.

The purpose of the Solstice Creek Steelhead Restoration Plan is to restore Solstice creek for enhancement of habitat for Federally endangered southern steelhead trout. This larger project involves eight components:

1. Remove in-stream barriers to fish passage
2. Remove sediment and debris from the stream channel
3. Replace two low water crossings with bridges
4. Remove non-native invasive plant species from within the stream and streambanks
5. Restore work areas damaged during barrier removal
6. Remove non-native invasive plant species from side channels
7. Remove non-native invasive species from areas influencing the riparian area (adjacent slopes) and re-vegetate with native plant species
8. Remove debris from adjacent slopes that could enter the stream course

Other grant funds have been obtained to accomplish steps 1 to 5. Steps 1 and 2 are complete. Step 3 is in progress (one bridge is complete, the second is under construction). Steps 4 and 5 are in progress. This project is seeking funds to complete the project by completing steps 6, 7, and 8. The Solstice Creek Steelhead Habitat Restoration Project will begin after all of the bridge construction and barrier removal is complete. This project focuses on restoration of riparian plant communities after the disturbance of construction and removal is complete. In total, these restoration actions will provide long-term protection

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## 10. Solstice Creek Habitat Restoration Project

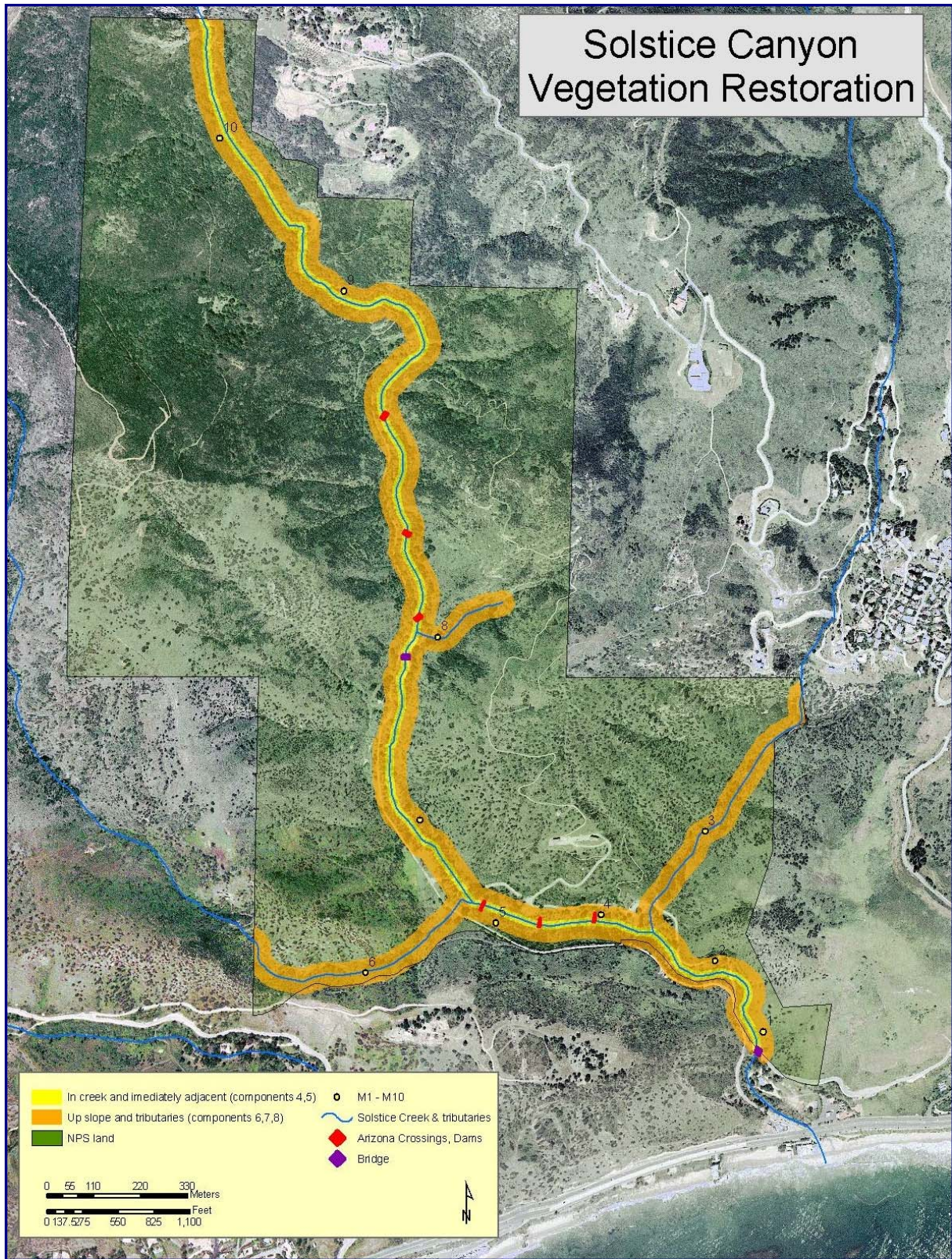
to the stream and steelhead habitat by removing all adjacent sources of debris, trash, and non-native invasive species propagules.

### Project Map

Project location and facilities are identified on **Figure 5-16**. The surface water body that we are working on (Solstice Creek) is identified in blue. There are no groundwater basins or disadvantaged communities within our work area. Monitoring locations are also shown.



Figure 5-16: Solstice Creek Restoration Project Location





## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (b) Land Purchase / Easement

No land or right of way acquisitions are necessary for this project because the project takes place entirely on land owned by NPS.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

Stakeholder outreach was conducted as part of the original NEPA process for the Solstice Creek Steelhead Restoration Plan in 2000 and 2002.

#### *Design / Engineering (Implementation Plan)*

The restoration work is designed based on previous work by NPS in Solstice Canyon. There are three work areas (Solstice Creek main stem plus two tributaries) and all work areas are identified on the project map. Within each work area, individual disturbed areas will be located and mapped using global position system tools. Once disturbed areas are mapped, a detailed Implementation Plan will be developed for the entire project area.

A detailed Implementation Plan includes maps and evaluations of each individual work area. The detailed plan is the blueprint for the entire project and must be detailed and site specific. The infestation map, application of integrated pest management, and drafting of the plant palette comprise the detailed implementation plan. The Implementation Plan includes Tasks 1 to 4 of the proposed project:

- **Task 1:** Infestation mapping (Project Manager) - Within the work areas, each individual non-native invasive species infestation must be identified. Each infestation will be mapped using a Trimble GeoExplorer and transferred onto a site map. The area of each infestation will be identified and the surrounding vegetation will be described. This task will begin upon grant contract signature in May 2007 and will take two months to complete.
- **Task 2:** Application of Integrated Pest Management (Project Manager) - After all infestations have been quantified, a removal plan will be developed for each infestation using integrated pest management principles. The most environmentally friendly and effective removal method will be chosen for each infestation on a site-specific basis. Removal efforts will start at the top of the watershed and work down stream.
- **Task 3:** Pre-Project Monitoring (Project Manager) - Prior to beginning eradication work, ten monitoring transects will be installed within the work area. The location of monitoring transects were chosen randomly. At each location a 30 meter permanent transect will be installed. One meter square plots will

## 10. Solstice Creek Habitat Restoration Project

be assessed for vegetation every 5 meters along the transect. In addition to vegetation transects, ten photopoints will also be installed and photographed prior to on the ground project work initiation.

- **Task 4:** Development of Native Plant Palette (Project Manager and United States National Park Service (USNPS) Restoration Ecologist) - Based on the vegetation descriptions in Implementation Plan, plant palettes will be developed for each infestation. Each area will be re-planted with appropriate native vegetation grown from seed or cuttings from Solstice Canyon. Species may include *Artemisia californica*, *Alnus rubra*, *Platanus racemosa*, *Encelia californica*, *Keckiella cordifolia*, *Venegazia carpesoides*, *Artemisia douglasiana*, *Salvia spathacea*, *Clematis lasiantha*, *Lessingia filaginifolia* and others. Development of a plant palette will be done during the application of integrated pest management principles to each infestation.

Design Submittals	
Implementation Plan	Oct 2007

### *Environmental Documentation*

This project requires NEPA permitting. An Environmental Assessment (EA), Finding of No Significant Impact, and public comment period were completed for the entire Solstice Creek Steelhead Habitat Restoration Plan in August 2005. In addition, NPS requires project specific NEPA compliance for our invasive species removal and re-vegetation activities. These activities were determined to be a categorical exclusion on November 10, 2003. This early environmental compliance was done for the ecological restoration portion of the project because we have been doing invasive species removal and native plant installation in the canyon riparian area as components of several projects since 2001. Environmental Documentation is included in Appendix 5-10.

Environmental Documentation Submittals	
Environmental Assessment	Aug 2005
Finding of No Significant Impact	Aug 2005
Categorical Exclusion for Restoration Plantings	Nov 2003

### *Permit Acquisition*

The restoration work described in this project only requires NEPA compliance from the NPS so no permits are required.

### **(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration will be conducted by NPS restoration ecologist (10% time) and by NPS administrative assistant (10% time). Project administration will include hiring of project staff, overseeing budget, and processing of timecards and other administrative tasks. This will also include drafting and signing of cooperative agreement with grant administrating agency.

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (d) Construction / Implementation

Construction consists of Tasks 5 to 10:

- **Task 5:** Growth of Plants for Outplanting (NPS Nursery Biotechnician) - NPS nursery biotechnician and NPS volunteers will grow plants for this project based on the plant palettes developed for each infestation. The nursery biotechnician and volunteers will begin propagating plants as soon as species are identified in Task 4.
- **Task 6:** Installation of Native Plants (Project Manager and Volunteers) - Restoration plantings will be installed using a combination of NPS and volunteer labor. The project manager will be responsible for planning volunteer planting days and coordinating field work. In addition, the project manager will recruit and train interested community members for on-going planting and site maintenance. We anticipate working with a wide variety of community, school, and youth groups based on our previous experience working in Solstice Canyon and other sites throughout the Santa Monica Mountains. The NPS has a large and diverse group of dedicated volunteers who assist with ecological restoration plantings and site maintenance. Plants will be installed based on infestation specific management actions identified in Task 2. No plants will be installed until initial non-native invasive species treatment has been applied and invasive species densities have been reduced to less than 30% cover. Reduction of invasive species to 30 percent cover or less will allow native species to thrive and begin to dominate each area. Native plants will be installed during winter and spring when natural rainfall and soil moisture is available and plants only need infrequent supplemental watering. No plants will be installed during summer months.
- **Task 7:** Site Maintenance - Years 1 and 2 (Project Manager and Volunteers) - The project manager will be responsible for aftercare of plants including watering, weeding, and mulching. Watering will be done using a combination of tank truck, direct watering from hosebibs where available, and use of fire backpack sprayers where necessary. The project manager will also train interested volunteers. Site maintenance during the initial project will be on-going and will take 5 to 10 hours per week. Weed removal and infrequent watering will be needed year-round.

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10. Solstice Creek Habitat Restoration Project

- **Task 8:** Post-planting Monitoring (Project Manager) - The project manager will re-take photopoints and reassess permanent transects once a year for the duration of the project. It should take one to two weeks each year to measure the monitoring transects and re-take photopoints.
- **Task 9:** Site Maintenance - Years 3 to 5 (NPS Restoration Biotechnician and NPS Restoration Ecologist) - After the completion of the project in 2007, yearly site maintenance (weeding) will be accomplished by NPS staff. Weeding will be required once or twice a year until canopy closure. This will require a one week effort by the restoration ecologist and biotechnician in the fall and the spring.
- **Task 10:** Drafting and Submittal of Final Report (Project Manager) - The project manager will analyze the monitoring data and submit a final project report. It should take one month to assemble and analyze all monitoring data and write the final report.

### (e) Environmental Compliance / Mitigation / Enhancement

The environmental protection measures determined for this project during environmental documentation include only using a dibble for planting whenever planting occurs in an area of known archeological resources and posting public notices to inform the public about ecological restoration activities.

### (f) Construction Administration

This project does not include construction so there is no construction administration.

## Discussion of Standards and Merits

### *Standards*

All species nomenclature in monitoring and plant palette design will follow the Jepson Manual of Higher Plants of California. Identification of species as non-native invasive plants will be based on the California Invasive Plant Council's Inventory of Invasive Plants of California's Wildlands. Planting techniques follow standard operating procedure for plant installation, mulching and watering. Plant density is based on field observations in Solstice Canyon and plant grouping is based on a field study performed by NPS staff (see Ecological Restoration 2004 22:4 p. 299).

### *Merits*

The project will use only site specific native plant stock. This ensures that species planted in restoration areas are of local genetic stock and will not dilute or disrupt any local adaptation of species on the site. Use of locally collected plant material can also increase plant survivorship and contribute to the long-term success of the restoration project.

## Coordination with Regional Agencies and State

For the specific work proposed in this project we have a cooperative agreement with the MRT to work cooperatively on invasive species removal and ecological restoration projects throughout the Santa Monica Mountains including Solstice Canyon.

For the overall Solstice Creek Steelhead Habitat Project we have cooperative agreements with:

- Resource Conservation District of the Santa Monica Mountains
- California Coastal Conservancy
- Wildlife Conservation Board

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## 10. Solstice Creek Habitat Restoration Project

- California Conservation Corps
- Heal the Bay
- California Department of Fish and Game

These agreements have allowed us to work cooperatively on steelhead habitat enhancement projects and to receive funds for the restoration of Solstice Creek. We also have informal working agreements with CalTrans, City of Malibu, and National Marine Fisheries. These working relationships have allowed us to assist them in steelhead habitat enhancement projects on non-NPS properties.



# 11. South Los Angeles Wetlands Park Project

## Detailed Project Description

### Project Need

The South Los Angeles Wetlands Park Project will improve water quality discharged to the LA River through capture and treatment of stormwater while creating a 9-acre park and restoring wetland habitat for recreation and wildlife within the surrounding disadvantaged community. The subwatershed surrounding the South Los Angeles Wetlands Park is mostly urbanized and residential with very little open space. The tributary area which drains to the site is approximately 520 acres and about 60% percent is impermeable surfaces in the form of rooftops, parking lots, industrial land, and roads. Because the area is so highly impermeable, the majority of wet weather and dry weather runoff will travel, via overland flow, to the storm drains, rather than infiltrate to the subsurface. The proposed project will remove key pollutants such as trash, sediments, heavy metals, and oil and will improve the water quality of the LA River.

The project will create a community resource of wetlands and riparian habitat in a densely populated urban area now covered in concrete, asphalt, and buildings. Trails, boardwalks, and educational signage located within the created habitats will provide park users with an accessible and quiet refuge within the City of LA to enjoy and learn about southern California ecology. The wetlands and riparian habitats would be supplied with pre-treated storm water, and would provide further pollution removal.

### Project Description

This project will involve the purchase of a 9-acre site currently owned by the Los Angeles County Metropolitan Transportation Authority (Metro) and is operated as a vehicle service facility. This project will convert this site into a wetlands park which will be designed to treat urban runoff from an 520-acre area. Subsequent to this project the site will also incorporate additional educational facilities. The proposed project will involve stormwater runoff diversion facilities from an adjacent storm drain. Wet weather runoff will be routed to a pretreatment facility that will remove debris such as trash, vegetation, and sediments. Runoff will then be pumped to the east end of the wetlands where it will undergo additional treatment as it flows through the wetland basin. The pretreatment and the wetland facilities will be designed to treat about 60 cfs (about 85% of the stormwater runoff) and a design intensity of 0.2 in/hr of precipitation. **Figure 5-17** shows the configuration of the proposed project.

The native plant species will also be chosen so that the site is self-sustaining during dry weather periods while providing additional treatment for the stormwater runoff. Based on the expected climate and hydrology for the site, five plant communities/ habitats have been chosen for the South Los Angeles Wetlands site: open water, emergent marsh, riparian scrub, riparian woodland, and upland. Additional microhabitats can also be created onsite to attract specific species or specific plant species can be incorporated into the upland habitats to attract birds and butterflies. Where feasible, mature vegetation will be used to give the appearance of fully developed plant communities and to minimize the time for these communities to obtain 50% coverage, the point at which they may be considered self-sustaining.

The South Los Angeles Wetlands Park will provide the South Los Angeles community a much needed public green space and recreational facility. Recreational activities that the park will offer include: bird and wildlife observation, photographic opportunities, trail walking and running.

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## 11. South Los Angeles Wetlands Park

The park will also serve as an outdoor classroom for school-age children and adults alike. Visitors to the Wetlands Park will learn about aquatic and riparian ecosystems, and observe native California habitat and species. Educational signage in the park could also include explanations of the physical and biological processes at work in a wetland, as well as how wetlands reduce non-point source pollution.

Subsequent to this project and as part of the larger effort, a multi-use facility will be built onsite, which could accommodate community and school programming. As a former transportation facility, the site would include rail museum elements, such as historic photos, artifacts, and interpretive pieces to document the history of mass transit in the City and preserve architectural heritage through the re-use of historical buildings. The railway museum will educate the public about the history of mass transit in Los Angeles. It should also be noted that the southern edge of the project site is bounded by the historic Yellow line repair station.

This project was also identified as one of the five projects in the 2004 Collection Systems Settlement Agreement (Appendix 11-1). The remaining projects are:

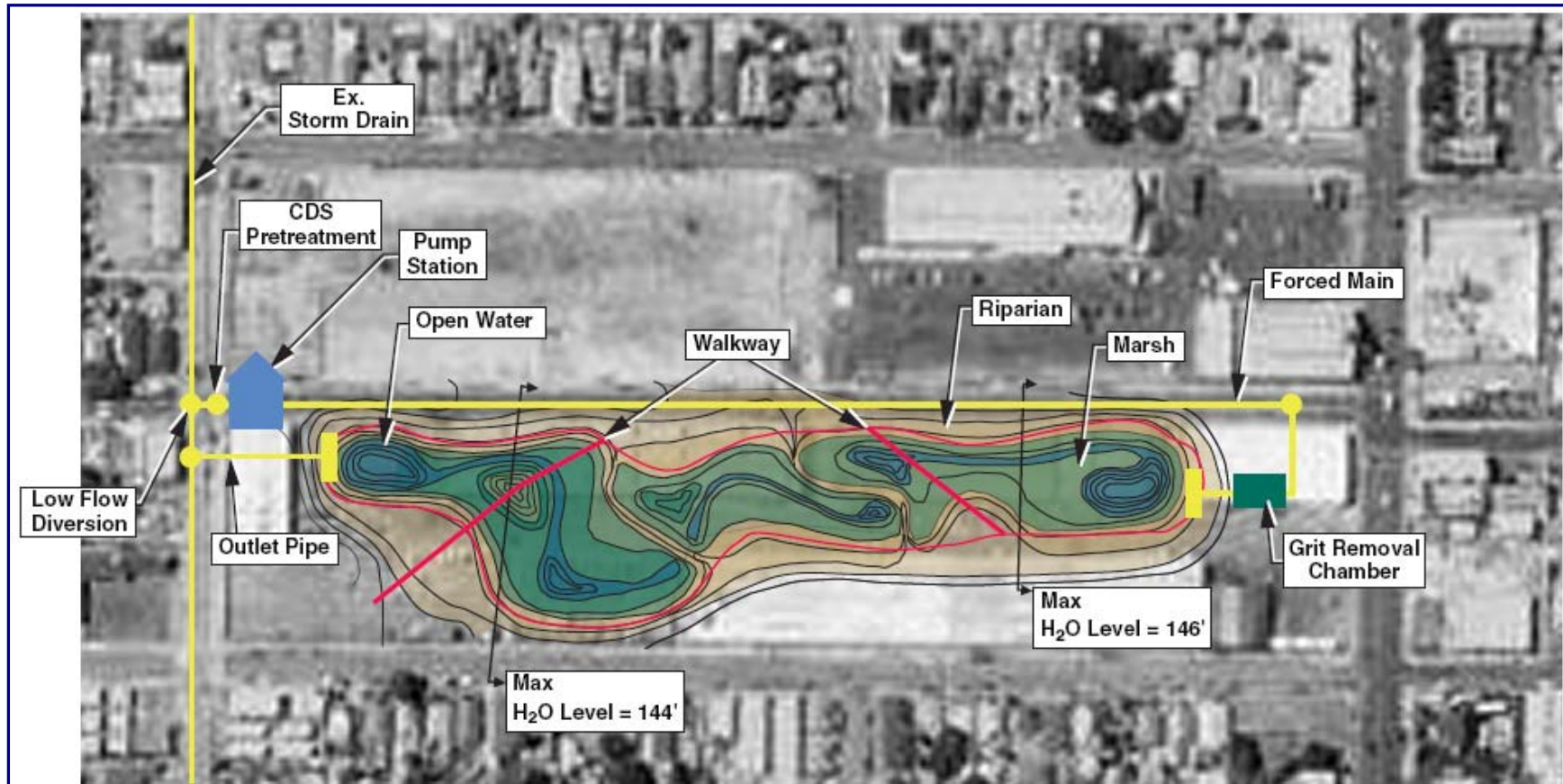
- **7. North Atwater Creek Restoration Project**
- Hazard Creek and Wetlands Restoration Project
- Inner Cabrillo Beach Pollution Control and Water Circulation Enhancement Project and
- Downtown Los Angeles Storm Drain Low-flow Diversion Project

In addition of these projects, the City of LA is implementing numerous projects that combine pollution abatement, wetland habitat creation, and the establishments of open space parks for use by the general public.

### Project Map

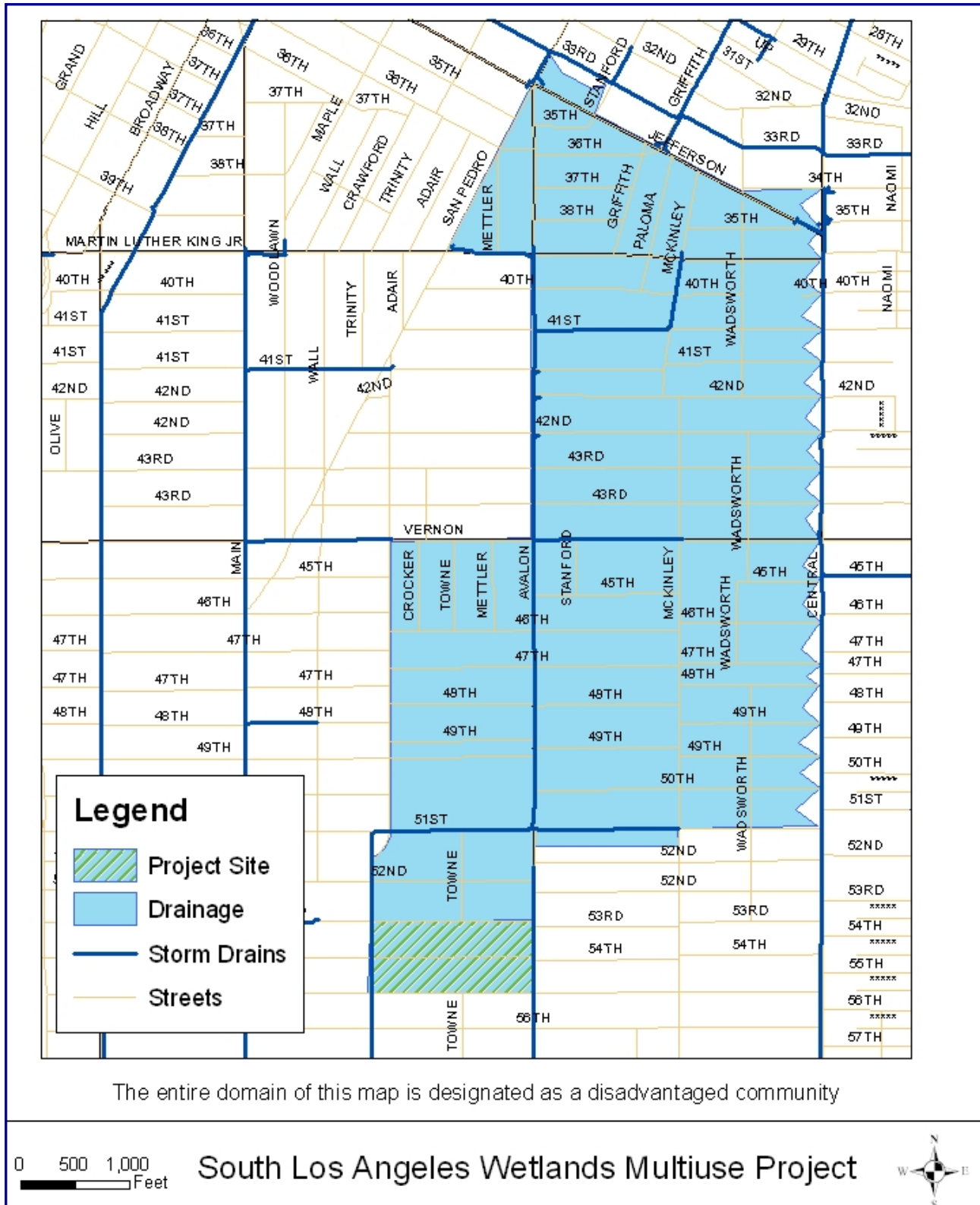
The project facilities and layout are shown in Figure 5-17. The layout also depicts the configuration of the wetlands. **Figure 5-18** is a vicinity map for the project that also shows the drainage area. The entire domain of this map is located within disadvantaged communities.

Figure 5-17: South Los Angeles Wetlands Project Location and Facilities



11. South Los Angeles Wetlands Park

Figure 5-18: South Los Angeles Wetlands Project Location and Facilities



## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration tasks related to the project will be performed by City of LA staff, which includes managerial, engineering, field and clerical personnel. The project administration activities include the following tasks:

- Seek and coordinate City of LA and State funding for the project
- Coordinate the approval of the various stages of the project by the City of LA's Board of Public Works, and the City Council
- Package construction contract proposal, advertise contract and solicit bids
- Evaluate bids, select contractor, and award bid
- Track overall project milestones, finance and budgets, and resource allocation
- Maintain project documentation
- Administer project quality control plan
- Prepare quarterly progress reports and deliverables to the State
- Oversee stakeholder participation through out project
- Coordinate maintenance training

### (b) Land Purchase / Easement

The proposed site for the South Los Angeles Wetlands Park is located in the City of LA, approximately 5 miles south of downtown Los Angeles and approximately ½ a mile east of the 110 freeway. The neighborhood is considered South Central Los Angeles, which is a highly urbanized area, with limited open space and community facilities. The location falls within the jurisdiction of the Ninth Council District.

The South parcel of the property is bounded by 54<sup>th</sup> and 55<sup>th</sup> streets is currently owned by Metro. The site was used as a vehicle repair station and the site is considered surplus property by Metro and they are a willing seller. Negotiations to acquire the property are near completion. On June 14, 2006, the Executive Management and Audit Committee of the Board of Directors of Metro unanimously approved the proposed sale. Councilwoman Jan Perry of the City of LA is leading the purchase acquisition efforts and has indicated that the land transaction is anticipated to be completed in the next two months.



## (c) Planning / Design / Engineering / Environmental Documentation

### *Planning*

Many stakeholders have already been involved in the project thus far and future stakeholder participation includes at least one public meeting that will include a wide range of neighborhood community groups and regional environmental groups. Public meeting will be announced to maximize public participation and community involvement.

The project was the focus of the South Los Angeles Wetlands Park Concept Feasibility Report, which was completed in April 2003. The report developed the project concept and considered the project feasibility. The report outlines the area surrounding the project and the ability to create a recreational and educational open space that also provides beneficial reuse and improvement to water quality. The objective is to create a dialogue amongst community leaders, private citizens, regulatory, and funding agencies to maximize the beneficial use of the project for the community. The project is so highly regarded that it was included among six projects specifically sited in 2004 Collection Systems Settlement Agreement (see Appendix 5-11) regarding sewage spills between City of LA, Los Angeles RWQCB, Santa Monica Baykeeper, and a coalition of community groups.

#### Planning Submittals

South Los Angeles Wetlands Park Concept Feasibility Report	Apr 2003
South Los Angeles Wetlands Park Draft Conceptual Report	Jun 2006

### *Design / Engineering*

The 10% Design will start in June 2006 and will be completed in August 2006. This task will finalize the project layout, project workplan, and preliminary cost estimate. This 10% Design will be reviewed by various City of LA departments and interested stakeholders. Subsequently, the 50% Design will be conducted and will prepare detail plans and specifications. The 90% Design will address comments received from the 50% design phase. The final construction documents will be prepared and will include final plans, specifications, and project engineer's detail cost estimate.

#### **The 10% Design submittals will include:**

- Surveys of the project site area and determination of staging of personnel and equipment
- Geotechnical report (soil boring test)
- Preliminary environmental report
- Complete hydraulic and hydrologic analysis to estimate flows and determine flow path
- Updated preliminary project schedule
- Conceptual site plans and design of access ways, walkways, parking lot, benches, rest areas, and restroom facilities
- Updated cost estimate
- Research permits required for the project

#### **The 50% Design submittals will include:**

- Review of issues and comments received at 10% design completion.

## 11. South Los Angeles Wetlands Park

- Updated cost estimate
- Environmental documentation
- Building and safety permits request
- Survey drawings
- Right-of-way maps and documentations
- Structural design and cost estimation for trash capturing system
- Pump sizing and flow calculation
- Landscape architectural layout of green areas, contour of the creek and wetlands
- Channel perimeter in-flow mitigation catch basin filters, improved utility access

**The 90% Design submittals will include:**

- Review of issues and comments received at 50% design completion
- Updated cost estimate
- Building and safety permits and all other permits
- Final survey drawings
- Final right-of-way maps and documentations
- Updated structural design and cost estimation for trash capturing system
- Incorporation of environmental requirements
- Final design calculations

**The 100% Design (final) submittals will include:**

- Drawing details and sections
- Completed and organized set of plans and specifications
- Coordination of the locations and features of the structures, substructures, equipment, fixtures, piping, conduits, ducts, building members, building appurtenances and utilities such that there are no physical conflicts that could prevent their installation or proper use
- Complete, signed, and “As-Advertised” plans and specifications.

Design Submittals	
10% Design and Cost Estimate	Aug 2006
50% Design	Nov 2006
90% Design	Feb 2007
Final Construction Documents	Apr 2007

*Environmental Documentation*

The environmental documentation is not completed. Based on preparation of an Initial Study Checklist (Appendix 5-11), CEQA requirements are anticipated to be fulfilled with a MND. The Initial Study Checklist was completed in June 2006. The Draft MND is anticipated to be compiled once the design is at

## 11. South Los Angeles Wetlands Park

50% in November 2006. The MND will be distributed for comments and is anticipated to be certified by the City of LA in December 2006.

Environmental Documentation Submittals	
Initial Study Checklist	Jun 2006
Mitigated Negative Declaration	Dec 2006

*Permit Acquisition*

Two environmental assessments, a preliminary endangerment assessment (PEA) and a supplemental site assessment were performed in 2004 and 2005 to identify subsurface contamination, if any. The PEA identified eight areas of potential concern for investigation. In response to the PEA, a Supplemental Site Assessment (SSA) was conducted. Based on the SSA findings, the California Department of Toxic Substances Control (DTSC) determined that the site would be suitable for a Wetlands Park provided that the pretreatment clarifiers that are still on-site are properly abandoned. The City of LA will submit its plan for the removal of the clarifiers and request permission to proceed in November 2006.

City-issued permits will be obtained from the City of LA. A meeting with USFWS at the project site to discuss the project and its relationship to any populations of listed species known or considered potentially present will be scheduled. No USFWS permit is required.

Permit	Purpose	Approval Date	Status
DTSC Permit	For abandonment of clarifiers and approval of site use	Nov 2006	Will be submitted in Dec 2006

**(g) Other**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Mar 2007
Labor Compliance Plan	Mar 2007

## Work Items to Complete after May 1, 2007

### (a) Direct Project Administration Costs

Project administration tasks related to the project will be performed by City of LA staff, which includes managerial, engineering, field and clerical personnel. The project administration activities include the following tasks:

- Seek and coordinate City of LA and State funding for the project
- Coordinate the approval of the various stages of the project by the City of LA's Board of Public Works, and the City Council
- Package construction contract proposal, advertise contract and solicit bids
- Evaluate bids, select contractor, and award bid
- Track overall project milestones, finance and budgets, and resource allocation
- Maintain project documentation
- Administer project quality control plan
- Prepare quarterly progress reports and deliverables to the State
- Oversee stakeholder participation through out project
- Coordinate maintenance training

#### Project Administration Submittals

Quarterly Progress Reports	Quarterly
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### (d) Construction / Implementation

A qualified contractor will construct this project. The completed construction contract documents will be advertised and bids will be solicited. The lowest responsible qualified bidder will be selected to construct this project. The construction of this project will include:

- **Stormwater Runoff Diversion** that will involve the construction of a berm along the storm drain that will route the flow to a pretreatment structure
- **Pretreatment System** that will provide removal of trash, sediment and vegetation. This will be accomplished through the use of a hydrodynamic separator such as a CDS system.
- **Pump Station** that is needed due to the elevation of the storm drain in relation to the upstream end of the wetland.
- **Wetlands** that will consist of a deep marsh system with a vegetated main channel. For the central part of the wetlands, significant amount of soil will be removed that will serve as fill for the peripheral area.
- **Irrigation and Piping System** that will ensure that the flow is properly distributed and that during the dry season adequate water is distributed to the plants. A "Smart Irrigation" system will be selected for this purpose.

Since the site is located in a densely populated area of the City of LA, construction scheduling needs to be done such that the surrounding neighborhoods are not drastically impacted by the construction activities. As one of the goals is to improve the neighborhood for its residents, the impact on the residents during

## 11. South Los Angeles Wetlands Park

construction is an important consideration, which will include the frequency and duration of street closures, truck traffic, street sweeping, watering the site during grading activities to reduce dust, etc.

Additionally, the sequencing of construction needs to be phased such that the new habitat is immediately supported by the water supply once the plants are installed (i.e. the runoff needs to be completely diverted and able to begin watering the wetlands before the wetlands habitat can be installed). Furthermore, the time of year that the project is built needs to account for the potential of wet season storm events, and therefore certain portions of construction should not be done during the wet season.

Existing structures that will require demolition include the Metro buildings and their associated parking lots. A staging area for construction vehicles will be onsite and traffic control measures, according to the approved traffic control plan, will be implemented along affected streets. Per communication between the DTSC and the City of LA, any contaminated soil at the site will be extracted before the remaining construction tasks begin.

Construction Submittals	
Notice to Proceed	Jun 2007
Final Construction Inspection Checklist	Dec 2008

### (e) Environmental Compliance / Mitigation/ Enhancement

The historical activities at the site have led to its classification by the DTSC as a site mitigation and brownfield reuse site (Envirostor Database ID 60000138) (CDTSC 2005). Per DTSC, brownfields are sites with actual or perceived contamination and the potential for redevelopment or reuse. A site assessment was conducted to determine any subsurface contamination. Two environmental assessments, a PEA and a SSA were performed in July 2004 and June 2005 to identify subsurface contamination, if any. The PEA identified eight areas of potential concern for investigation. In response to the PEA, a SSA was completed and found that the organic contaminants concentrations to be below levels that would require remediation. Because the site currently has a number of abandoned pretreatment clarifiers, these need to be removed prior to execution of the other implementation tasks. DTSC has concurred that the site is suitable for a wetlands park.

Another primary goal of this task is to ensure that construction activity is consistent with regulatory requirements. This project will require the preparation of a SWPPP for the duration of the construction. This will involve both the project administrator and the construction contractor to have proper SWPPP certified training, a thorough SWPP on site and its proper implementation. This includes details on planning, staging, storing, transporting, sorting and disposal of materials removed from the park area during construction complying with all environmental standards. Maximum effort will be made to identify and recycle all recyclables.

### (f) Construction Administration

Construction management and engineering services during construction activities included will be performed by the City of LA. These efforts include:

- Identify and set up cost tracking mechanisms with related work orders.
- Complete Bid and Award Process, provide notice to proceed construction, provide neighborhood notification of construction project including its funding, duration, goals and objectives of the project



## 11. South Los Angeles Wetlands Park

- Track the quality of the construction project by conducting periodic inspections
- Coordinate construction activities with all stakeholders by holding periodic meetings, reviewing construction progress and providing timely feedback.
- Identify lead inspector from the Bureau of Contract Administration, establish regular communications with the person
- Provide periodic updates to stakeholders through e-mail, mailings, and neighborhood meetings
- Provide information for the quarterly reporting to the State
- Complete project, follow up with reports, auditing spare parts and provide training for operations/maintenance personnel
- Close out of construction contract

**(g) Other**

The MP, and QAPP will be prepared prior to start of construction, which is expected in June 2007.

Other Submittals	
Monitoring Plan	Jun 2007
Quality Assurance Project Plan	Jun 2007

## Discussion of Standards and Merits

### *Standards*

Construction material that will be used in the project shall conform to the standards and applicable codes of the State of California. This is in addition to construction materials as stated in the Greenbook. All equipment furnished and used by the contractor shall comply with City of LA Building and Safety construction codes, City of LA Fire Codes, CAL OSHA Title 8 codes for Industrial Safety. Standards that relate to specific knowledge, training, operations, and license to operate the equipment shall be specified in the contract documents. Finally, construction equipment shall comply with the latest Rules and Regulations of the SCAQMD.

### *Merits*

The project will be implemented in accordance with established professional standards. The leading construction material for the project will consist of concrete structures and mechanical equipment. These materials will be used consistent with established City of LA codes and established standards. The restoration of the creek and the establishment of the wetlands will be consistent with established restoration practices. Finally, established engineering practices will be used to determine the sizing and selection of materials for all new constructed facilities.

## Coordination between Regional Agencies and State

Formal and informal discussions have taken place and conceptual commitments have been received from USACE. USACE will serve in a consultation role to the City of LA during the design, construction, and monitoring of the wetlands. As USACE issues general permits for discharges of dredged or fill material into waterbodies and no water is being discharged from the site, no permits from USACE will be required at this time. However should any subsequent maintenance activities result in discharge they will be consulted.

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## 11. South Los Angeles Wetlands Park

Formal and informal discussions have taken place and conceptual commitments have been received from the LACDPW. LACDPW will serve in a consultation role to the City of LA during the design, construction, and monitoring of the wetlands. The project is within the County of Los Angeles; should any permits be needed from them the City of LA will consult further.

The Community Redevelopment Agency is in support of the Wetlands Park. The Wetlands Park complements CRA's on-going and planned commercial and industrial revitalization efforts in the Council District 9 Corridors South of the Santa Monica Freeway Recovery Redevelopment Project (CD9 Project) by eliminating blight and increasing green open space resources within a densely populated urban environment. Support from CRA on previous community redevelopment projects has included partnering with CD 9 to build the Augustus Hawkins Wetland Park approximately 2 miles away near the intersections of Compton Avenue and Slauson Boulevard.

Community and Neighbors for the Ninth District Neighborhood Council (CANNDU) has taken a leadership role in environmental issues in South Los Angeles. The organization takes an active role in monitoring environmental legislation and providing input on various environmental planning efforts. CANNDU also manages the South Los Angeles Community Emergency Response Team Training Center, which trains residents in disaster preparedness.

The USFWS interests in the project lie in the monitoring of the biological species that will inhabit the wetlands. No permit will be required from the agency at this time. They will be consulted in regards to any biological species present before and after construction.

By State law the CDFG has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. The CDFG shall consult with lead and responsible agencies and shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities. This project will not need permits from the CDFG.

## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Facilities

### Detailed Project Description

#### Project Need

The project will address elevated N-Nitrosodimethylamine (NDMA) concentrations in tertiary effluent to allow continued groundwater recharge of up to 10,000 afy for indirect potable reuse. Also, the project will impact NDMA strategies for groundwater injection of up to 50,000 afy from LACSD facilities as well as national implementation.

#### Project Description

This project will convert the disinfection practices at the 15 million gallons per day (mgd) Whittier Narrows WRP from chlorination to UV disinfection. Currently, the tertiary-treated filtered effluent that this plant produces is disinfected to Title 22 standards by chloramination, which requires the addition of chlorine and ammonia. The vast majority of this water is currently discharged to the Rio Hondo and San Gabriel Coastal Basin Spreading Grounds, also known as the Montebello Forebay Groundwater Recharge Project, where the effluent is blended with other water supplies for groundwater replenishment.

This groundwater, after subsequent pumping and treatment, ultimately becomes the drinking water supply for over one million residents in the greater Los Angeles area, including for many disadvantaged communities. In the near future, a portion (approximately 4 mgd) of the treated flow will be beneficially reused to irrigate an adjacent recreational park area, instead of being discharged. The remaining recycled water (~9 mgd) from the Whittier Narrows WRP will continue to be used for groundwater replenishment.

Over the past decade, LACSD has successfully converted the Whittier Narrows WRP, as well as a number of other water reclamation plants, to a nitrogen removal process known as nitrification/denitrification (NDN). These changes were made to comply with new requirements for ammonia contained in NPDES permits for these facilities and were required to be met by June 2003. NDN has been successful at lowering effluent ammonia levels, making the effluent less toxic to aquatic life.

However, an unintended consequence of the newly implemented treatment process is that higher levels of NDMA are produced in the final disinfection step. Since the modification of the treatment plants to the NDN mode, NDMA has been observed at shallow groundwater monitoring wells which are part of the Whittier Narrows Operable Unit. These wells are near the Whittier Narrows WRP discharge point to the Rio Hondo Spreading Grounds and the elevated NDMA levels have been linked to Whittier Narrows WRP effluent by joint studies performed by LACSD and the EPA, and in turn reviewed by California DHS and the Los Angeles RWQCB.

This project will change the disinfection practice from chloramination to UV light irradiation to prevent NDMA generation and destroy a significant portion of NDMA that is normally in the effluent as well as result in secondary water quality benefits. This project, in combination with other LACSD actions to address the elevated NDMA levels (such as source control, operational changes at the Whittier Narrows WRP, and research and development of a dilution and attenuation model), should:

- Restore the groundwater to the NDMA levels that were typically observed before the NDN implementation;

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## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

- Assure compliance with multiple regulatory requirements (such as those for disinfection and for water recycling);
- Allow continued use of recycled water for groundwater recharge;

Ensure no new issues regarding disinfection byproducts arise, such as trihalomethanes, and reduce or eliminate the potential for ammonia to be present in the treated effluent.

Most importantly, this project will ensure that up to an average of 50,000 afy of recycled water can continue to be recharged into the Montebello Forebay of the Central Basin, thus avoiding the need to import water from other regions for that purpose. This amount of effluent is the annual volume of recharge permitted from the three tributary LACSD facilities: Whittier Narrows WRP, San Jose Creek WRP, and Pomona WRP. The Whittier Narrows WRP currently contributes most of its effluent to this project (currently 5,600 afy) and will contribute more in the future (up to 10,000 afy) after other plant modifications are implemented. The other two plants mentioned above contribute the remainder, and are linked to this project by their NPDES permits and the regional NDMA issue. The Montebello Forebay Groundwater Recharge Project is a joint project of LACSD, Water Replenishment District of Southern California (WRD) and LACDPW.

UV disinfection at the Whittier Narrows WRP is a pivotal project because it is a demonstration project of this technology at LACSD facilities and one of only a few publicly owned treatment works in the Los Angeles Region to employ this technology at a tertiary wastewater treatment plant. Following successful project implementation and operations, other LACSD water reclamation plants may also convert to UV disinfection. This project is an important first step in the conversion process because lessons learned from this project will be applied at the other plants, as appropriate, in a cost-effective manner.

As mentioned above, the project is an important water quality improvement project that is part of a set of investigations and actions underway to address elevated NDMA levels in tertiary treated water disinfected by chloramination. These activities are described in supporting documents, including the San Jose Creek and Pomona Water Reclamation Plants NPDES permits (Order Nos. R4-2004-0099 and R4-2004-0097, Finding No. 48 and 47, respectively) (Attachment 8, References 12-2 and 12-1, respectively) and reports that have been submitted to the Los Angeles RWQCB [see Attachment 8, Reference 12-1 (Letter to Los Angeles RWQCB dated April 2004)]. These other activities are mostly being performed in parallel and include, among other things, source control, technical research, operational changes to the Whittier Narrows WRP and to the Montebello Forebay Spreading Operation, and attenuation and dilution studies (including development of a model).

The project is pivotal because it will serve as a UV demonstration project for LACSD (which operates a total of 10 water reclamation plants in Los Angeles County), as well as for the region. The lessons learned from the Whittier Narrows WRP conversion will be valuable in evaluating and designing upgrades at the other plants to the dual disinfection approach. Because UV disinfection is not commonly used at other water reclamation plants in this region, this project will also serve as a model for other treatment plants and agencies outside of LACSD.

### Project Map

Project location and facilities are identified on **Figure 5-19**. It shows the close proximity of the three effluent discharge points to the Whittier Narrows WRP. These are the Rio Hondo, the San Gabriel River and the Zone 1 Ditch (the latter ultimately flows to the Rio Hondo). In addition, the figure identifies the Rio Hondo and San Gabriel River Spreading Grounds that are used to recharge the northern and upgradient region of the Central Basin with a blend of treated effluent, runoff and upstream dam releases.

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## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

This figure also shows the existing and proposed monitoring well locations, that will be used to track NDMA levels in the groundwater, and which are further discussed in Attachment 9. The figure shows that the Whittier Narrows WRP is in the Main San Gabriel Basin, and it is surrounded by the Whittier Narrow Dam Recreation Area, which is designated a Significant Ecological Area.

Disadvantaged communities that lie within the WRD service area, which includes the West Coast Basin and Central Basin, are depicted in **Figure 5-20**. The benefits of recycled water from the Whittier Narrows WRP are distributed to all water rights holders in both basins through costs savings in WRD assessment, and the map shows that a significant portion of those communities served are disadvantaged. These disadvantage communities were listed in the Step 1 application.



Figure 5-19: Whittier Narrows WRP UV Project Location and Facilities

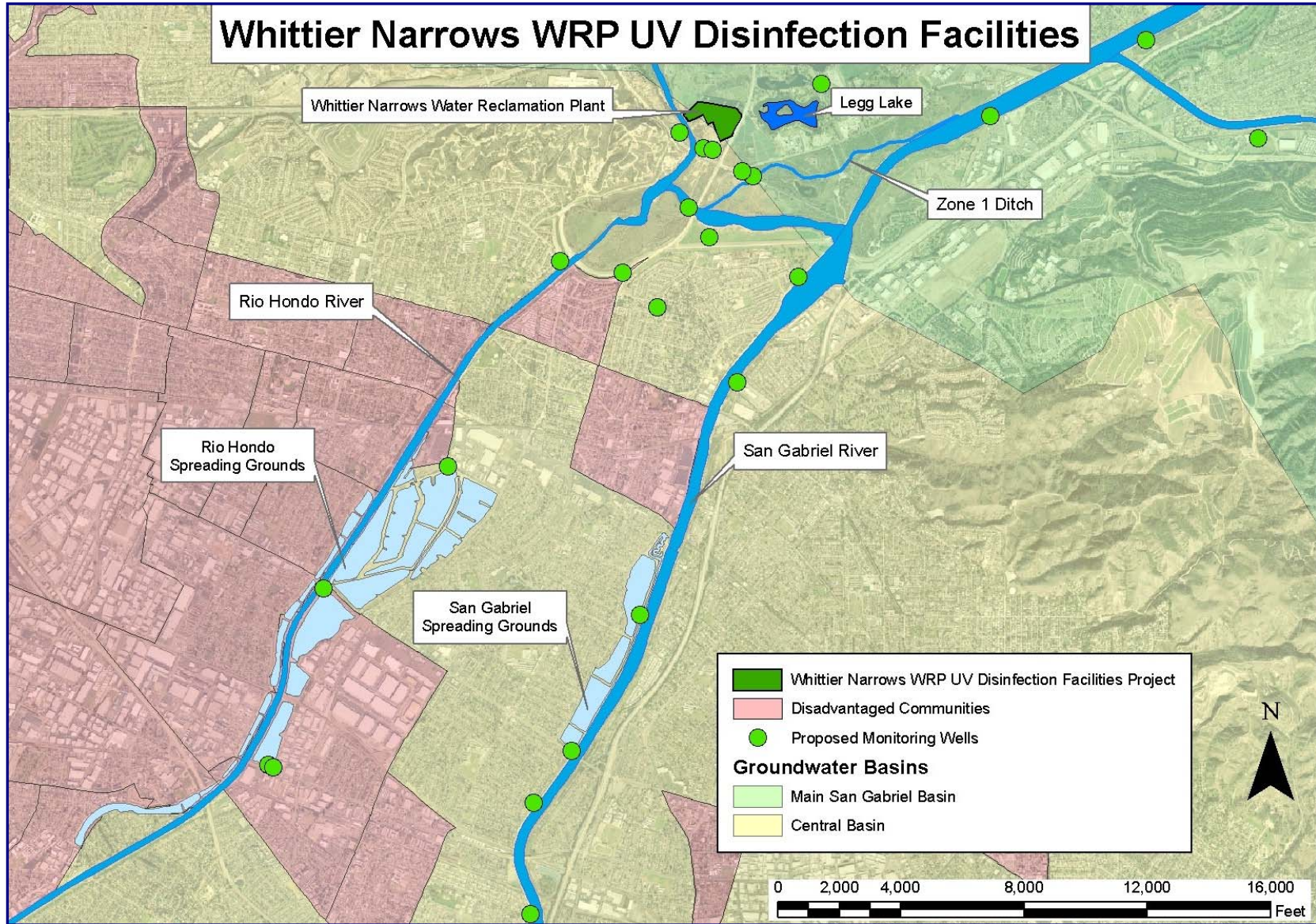
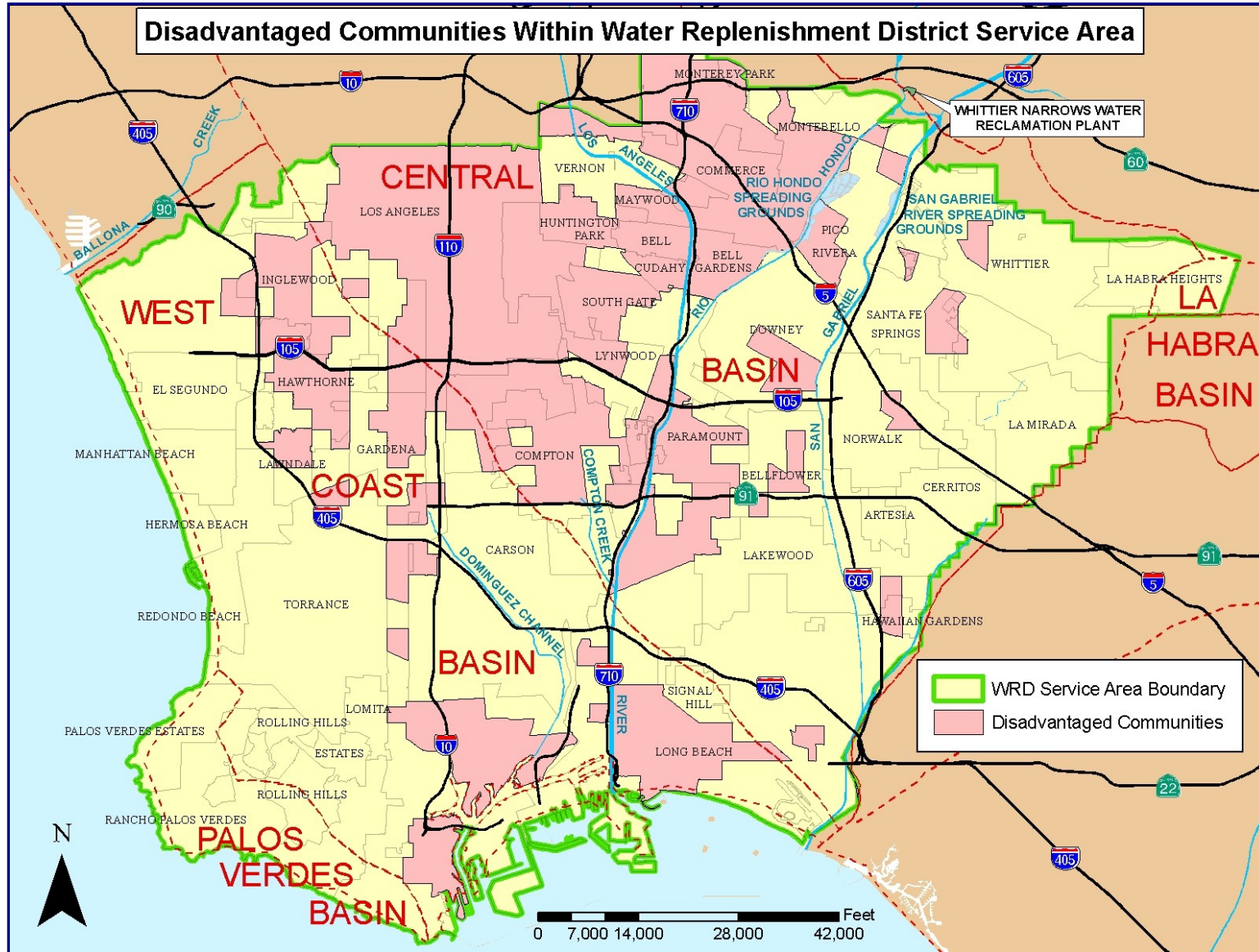




Figure 5-20: Whittier Narrows WRP UV Project Disadvantaged Communities



## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration tasks related to the project will be performed by LACSD staff, which includes managerial, engineering, field and clerical personnel. The project administration activities include the following tasks:

- Develop contract agenda item for the LACSD Board of Directors
- Provide for advertisement of contract
- Distribute bid invitations and issue instructions to potential bidders
- Evaluate bids and selection of lowest responsible bidder
- Check that bonding requirements have been met
- Let contracts and obtain procurement of services
- Give Notice to Proceed after all requirements have been met
- Administer project finances
- Maintain contract escrow bid documents
- Control project records and document distribution
- Handle basic administration, planning, meetings, actions and recordkeeping
- Identify project stakeholders and their various roles and needs
- Ensure and maintain proper labor practices and wage rates
- Administer project quality control plan
- Manage risk assessment plan

### (b) Land Purchase / Easement

The land associated with this project is already leased by LACSD, owned by the Federal Government, and operated by USACE. Therefore, no additional effort to implement the project is required.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

The feasibility of the project has been addressed by vendor equipment validation studies, in-house pilot studies, and a Preliminary Design Report prepared by LACSD. Equipment validation studies determined the power and effluent flow per lamp to achieve the required dosage with effluent of different UV

## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

transmissivity. This allows the calculation of the overall number of UV lamps required and the necessary power for different flows and effluent conditions for daily operational control. Additional in-house pilot studies were performed at Whittier Narrows WRP to make sure no other disinfection byproducts, such as cyanide, were being generated that would cause compliance issues in the future. The Preliminary Design Report analyzed retrofitting the existing facilities with the dual disinfection process and making it work in conjunction with a newly completed reuse pump station design and construction that was recently completed.

At least two public meetings will be held as part of the environmental documentation process and attendance sheets for each meeting will be submitted to the State. Also, a number of meetings have been held with various agencies, including the WRD, LACDPW, Los Angeles RWQCB, United States Environmental Protection Agency (EPA) (Region IX), DHS, LACDPR, and Upper San Gabriel Valley Municipal Water District.

### *Design / Engineering*

The Preliminary (30%) Design was completed in November 2005 (see Appendix 5-12) and the final design will be complete by December 2006. The preliminary design was prepared by LACSD staff and the same staff will prepare the Final Design. A description of each stage of design and submittals are discussed in the following sections.

**Preliminary (30%) Design** - The Preliminary Design was completed in November 2005 and included project objectives, facility siting and facility layout. A cost estimate was performed based on the preliminary results of the validation work done by the two major UV equipment vendors, Trojan and Wedeco. The number of UV lamps was determined for the design UV transmittance, peak sanitary flow and peak wet weather flow conditions.

**75% Design** - The 75% Design submittal will include details of the solicitation, evaluation and selection of UV equipment cost proposals, including the Request For Proposal and UV equipment specifications. Pre-selection is necessary so that the successful bidder's equipment can be incorporated in the latter stages of design. The UV equipment procurement agreement will be ultimately transferred to the contractor. A listing of the proposed contract specifications will be provided. Completed structural and seismic analyses will be provided that ascertain the structural integrity of the existing chlorine contact tanks with the proposed retrofitting of UV equipment and channels. Appurtenant equipment will be sited, including electrical. A revised cost estimate will be performed that includes the final cost of UV equipment. Permitting and environmental documentation will be in progress.

**Final Design** - Final Design & Construction Documents will consist of the design package that will be advertised for project award for construction/implementation of the project. The package will consist of the complete, signed, and "As-Advertised" plans and specifications. Also, a final cost estimate will be performed.

Design Submittals	
Preliminary (30%) Design Report	Nov 2005
75% Design Package	Sep 2006
Final Design Package	Dec 2006

### *Environmental Documentation*

The project will undergo environmental review in conformance with the CEQA and NEPA.

## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

USACE is the lead agency for NEPA since the plant is located on land owned by the Federal Government and leased from USACE. The project may be eligible for a Categorical Exclusion from NEPA since it is an action causing no significant environmental impact and may be eligible for a statutory exclusion under the Clean Water Act (33 U.S.C. 1371(c)(1)).

Based on IS Environmental Checklist Form (see Appendix 5-12), LACSD anticipate filing a Negative Declaration for CEQA and conducting two public meetings for review and comments. The project may be eligible for a categorical exemption from CEQA (Class 1 -15301b and Class 2-15302c of CEQA Guidelines) because it is a modification of existing disinfection facilities, having essentially the same purpose and capacity as the previous facilities, and are to be constructed within the same footprint.

Environmental Documentation Submittals	
Initial Study Environmental Checklist Form	Apr 2006
NEPA Documentation (Categorical Exclusion)	Oct 2006
CEQA Documentation (Initial Study, Negative Declaration)	Oct 2006

### *Permit Acquisition*

The project has a number of permits required for project implementation. These permits will be acquired in concurrence with progress on the project design, depending upon the specific permit.

The Engineering Report will provide regulatory agencies (such as the California Department of Health Services, Los Angeles County Department of Health Services, Regional Water Quality Control Board and State Water Resources Control Board) with design basis details and demonstrate that modifications will be successfully incorporated in the existing treatment train. Also, the report will include details on the UV equipment, monitoring, controls, reliability, contingency plans, operation and maintenance, and training of personnel.

The Field Commissioning Tests are performed to ensure that the UV disinfection system is operating properly and according to its intended design. The commissioning tests include testing of electrical components, flow velocity or bioassay testing through the reactors, flow splitting among reactors, water level control, other controls and alarms, and instrument calibration.

The two major UV equipment vendors, Trojan and Wedeco, were invited to pilot test their equipment at the Whittier Narrows WRP using actual plant effluent, which is recommended for relatively large projects such as this one. Trojan agreed to revalidate their current UV equipment (with LSI lamps) at a wider spacing to improve hydraulics, but Wedeco preferred to rely on their previous validation work. Subsequent to approval of their revalidation, Trojan also ran validation tests on their system with a new, more efficient lamp (Heraeus lamps) that would decrease the required number of lamps in the project. This Heraeus lamp system validation and the appurtenant end of lamp life validation were recently accepted by DHS at the end of April 2006.



## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

Permitting Submittals	Purpose	Approval Date	Status
DHS Acceptance Letter of Trojan Equipment Validation – LSI lamps with 4 inch spacing	Dosage regression approval necessary for design with LSI lamp system	Oct 2005	Accepted by DHS
DHS Letter of Acceptance of Trojan Equipment Validation– Heraeus lamps with 4 inch spacing	Dosage regression and EOLL approval necessary for design with Heraeus lamp system	Apr 2006	
Engineering Report	Describe basis of design to DHS and RWQCB	Nov 2006	Will be submitted with 75% Design

**(g) Other Costs**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A Labor Compliance Plan will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Mar 2007
Labor Compliance Plan	Mar 2007
Quality Assurance Project Plan	Mar 2007
Monitoring Plan	Mar 2007

## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

Project administration tasks related to the project will be performed by LACSD staff, which includes managerial, engineering, field and clerical personnel. The project administration activities include the following tasks:

- Develop contract agenda item for the LACSD Board of Directors
- Provide for advertisement of contract
- Distribute bid invitations and issue instructions to potential bidders
- Evaluate bids and selection of lowest responsible bidder
- Check that bonding requirements have been met
- Let contracts and obtain procurement of services
- Give Notice to Proceed after all requirements have been met
- Administer project finances
- Maintain contract escrow bid documents
- Control project records and document distribution
- Handle basic administration, planning, meetings, actions and recordkeeping
- Identify project stakeholders and their various roles and needs
- Ensure and maintain proper labor practices and wage rates
- Administer project quality control plan
- Manage risk assessment plan

Project Administration Submittals	
Quarterly Progress Reports	Quarterly

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Permit Acquisition*

The Field Commissioning Tests are performed to ensure that the UV disinfection system is operating properly and according to its intended design. The commissioning tests include testing of electrical components, flow velocity or bioassay testing through the reactors, flow splitting among reactors, water level control, other controls and alarms, and instrument calibration.

Permitting Submittals	Purpose	Approval Date
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## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

Field Commissioning Test – First Two UV Trains	Verify operational integrity to DHS and RWQCB	Jan 2008
Field Commissioning Test – Total UV System		Jun 2008

**(d) Construction / Implementation**

Construction will be performed by a general contractor that will be selected through a low-bid process. The construction package will include three main facilities: 1) UV equipment and lamps; 2) Backwash filter pump; and 3) Chlorination facilities.

A large portion of the cost of a UV construction project is the UV equipment and lamps. This equipment will be constructed in concrete UV reactors on the top of two existing chlorine contact tanks (CCTs). These existing CCTs will then be used for storage of recycled water. A new recycled water pump station located next to the CCTs has recently been completed. The work will be split into two phases, in which one CCT is taken out of service at a time to keep the plant operational.

A new backwash filter pump will be provided in one of the contact tanks to even out the effluent flow for UV disinfection, since the required UV dosage application is very flow sensitive. Other work consists of installing flow channels for routing of water to storage or receiving water, automated sluice gates and weirs to provide isolation and flow control, and sampling modifications so the proposed facilities can meet existing regulatory requirements.

Existing chlorination facilities will be modified to provide for a dual barrier system utilizing free chlorine. Chlorine will also provide the option of maintaining a chlorine residual for the reuse pipeline. Existing ammonia facilities will be modified so that the pipeline residual can be a free chlorine residual or chloramine residual, at the discretion of the purveyor.

The sequence of construction and implementation follows from the above description and the schedule contained in Attachment 7. Construction will begin by taking the first of two existing chlorine contact tanks out of service and constructing the UV channels on top. The second CCT will continue to be operated with existing chloramination disinfection. Other work will be performed concurrently to install the filter effluent backwash pump and equipment, modify sampling equipment, and modify chlorination and washwater facilities.

Following fabrication and delivery of UV equipment, installation will proceed on the first two of four UV trains. Then the field-commissioning tests will be performed on the first two UV trains, with the test report submitted to DHS and RWQCB. Since the acceptance of the field commissioning will require an uncertain amount of time, the first UV modified CCT will be returned to chloramination service in order to continue to produce effluent meeting Title 22 requirements for reuse. The second CCT will be taken out of service and construction will proceed on the two UV channels over that CCT. Following this, the last two UV trains will be installed over the second CCT. Field-commissioning tests will then be performed on the last UV trains and the entire system and the report submitted to DHS and the RWQCB. Upon acceptance of the field-commissioning tests, the entire disinfection operation will be switched to the dual barrier disinfection system.

Although the occurrence of wet weather is not considered a major factor in this construction project, the Whittier Narrows WRP does provide hydraulic relief of the downstream sewers and the JWPCP. The inflow and infiltration of water into the sewer system that are associated with normal rainfall amounts can usually be tolerated without spills. However, if there are successive storms and forecasts of heavy rain,

## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

the construction sequence may be altered to provide extra capacity at the Whittier Narrows WRP in order to avoid sanitary sewer overflows downstream or to provide extra hydraulic relief at the JWPCP.

Construction Submittals	
Notice to Proceed	Apr 2007
Project Acceptance by LACSD Board of Directors	Jul 2008

### (e) Environmental Compliance / Mitigation / Enhancement

Environmental compliance, mitigation, & enhancement activities will be defined during completion of environmental documentation. Anticipated activities include routine dust control and sediment control.

Dust control will be an issue during concrete demolition and traffic around the construction area. There is no earthwork involved with this project. Sediment control will be an issue at the contractor's laydown area but no transport of sediment and construction materials off the plant boundaries will be addressed.

### (f) Construction Administration

Construction administration/management will be performed by LACSD engineering staff and will include the following activities:

- Manage pre-construction meeting
- Check qualifications of construction management team
- Evaluate qualifications of special inspection where applicable
- Arrange for survey to set stakes and stationing
- Process or forward requests for information (RFI's)
- Check that work is performed according to contract documents
- Check that equipment is supplied according to approved submittals
- Track work tasks and deliverables on the project's critical path
- Interpret information from project management software tools
- Perform or review progress updates and reports
- Track work completion for payments
- Keep track of work performed on "time and materials" basis
- Coordinate shutdowns and critical work with plant operations
- Identify any ongoing operational constraints
- Keep track of plant security issues
- Keep track of construction mitigation issues
- Keep track of health and safety issues
- Provide for checkout of equipment and systems
- Verify any intermediate, mechanical and contract completion milestones

Engineering services will be performed by LACSD engineering staff and will include the following activities:

## 12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

- Establish construction milestones and evaluate liquidated damages
- Define the project Grant Contract Scope of Work and distinguish out of scope work
- Issue contract drawings and specifications
- Perform pre-bid jobsite walk-through
- Issue addendums to contract documents
- Obtain fire department approval where applicable
- Review contractor badge and security system
- Work with contractor and field for acceptance of baseline construction schedule
- Review submittals
- Provide services for witness testing where applicable
- Process requests for information (RFI's) received from the field
- Issue changes in work as appropriate
- Track extra work claims and credit
- Process engineering change orders
- Document with change orders with justifications and forward for legal review

## Construction Administration Submittal

Monthly Construction Reports

Monthly

## Discussion of Standards and Merits

### *Standards*

All work performed and all equipment furnished and installed will be in strict conformity with all current, applicable codes of the State of California. In addition, all work performed and equipment furnished under this contract shall meet the minimum requirements of the latest edition of the County of Los Angeles Building Code and the County of Los Angeles Fire Code, and the California Division of Industrial Safety Regulations (Title 8), in effect at the time of bid.

All equipment furnished will be in accordance with the latest Rules and Regulations of the SCAQMD including Rule 2202 and the latest best available control technology. All contractor work practices that may have associated emissions such as sandblasting, open field spray painting, demolition of asbestos-containing components or structures, etc., shall also comply with the appropriate Rules and Regulations of the SCAQMD.

The special provisions in the contract documents are supplemented by the Standard Specifications for Public Works Construction, 2003 Edition, complete with Amendments to Standard Specifications for Public Works Construction, 2003 Edition, by LACSD, dated December 2003.

### *Merits*

The principle building materials that will be used for project development include reinforced concrete and structural steel. All cement shall be type II Portland cement conforming to ASTM C-150. Reinforcing steel shall be Grade 60 and conform to ASTM A-615. Concrete strength tests are specified in section 201-1.14 of LACSD Standard Specifications. Cement content tests are performed in accordance with ASTM



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12. Whittier Narrows Water Reclamation Plant UV Disinfection Project

C-85. LACSD will supply special inspection for reinforced concrete construction and the contractor will provide special inspection of welding or reinforcing steel in accordance with AWS and Los Angeles County Building Code. Structural steel will conform with A-992 or ASTM A572 (flanges) and ASTM A-36 (plate, angle and channels). Welders shall be certified by AWS or the City of Los Angeles. Welding inspection shall be performed by AWS certified inspectors who are also certified by the Los Angeles County Building Department.

UV equipment that will be supplied will conform to the Ultraviolet Disinfection – Guidelines for the Drinking Water and Reuse (2<sup>nd</sup> edition), dated May 2003, and published by the National Water Research Institute, and in collaboration with the AWWA Research Association and the California Department of Health Services (NWRI Guidelines). The UV equipment validation studies followed testing protocols established in the guidelines. Regression equations from these studies establish the power and flow per lamp required for the particular dosage requirement at different UV transmittances of the plant effluent and are developed by a third party consultant for the equipment vendor per National Water Research Institute (NWRI) Guidelines, and accepted by DHS.

### *Health and Safety*

All work performed and all equipment furnished and installed will be in strict conformity with all current, applicable codes of the State of California, including the California Division of Industrial Safety Regulations (Title 8). In accordance with regulatory requirements, the Contractor shall maintain written health and safety program information at the work site. In addition, the Contractor shall maintain at the work site any appropriate programs requested in the specifications. The Contractor will also maintain at the work site Material Data Safety Sheets for all hazardous materials used by the Contractor at the work site. Contractors are required to operate and maintain their own safety equipment.

The Contractor shall be responsible for the development of Site Health and Safety Plans as required by the Contract Specifications, Occupational Safety and Health Administration (OSHA) regulations, California Code of Regulations, and EPA regulations. The Contractor shall appoint an individual to act as the Health and Safety Officer for the project. The Contractor's Health and Safety Officer must have a complete knowledge of the safe work practices (OSHA guidelines/regulations) governing the project. The Contractor's Health and Safety Officer shall participate in the Pre-Construction Safety Meeting and shall have the authority during the project to correct safety deficiencies identified at the construction location. Prior to the issuance of the Notice to Proceed, the Contractor shall meet with a representative of the LACSD in a Pre-Construction Safety Meeting for the purpose of reviewing safety procedures and other pertinent safety information that will aid in ensuring safe project completion. During the Pre-Construction Safety Meeting, LACSD and the Contractor will review and complete the Contractor Safety - Potential Hazard Notification Form and the Pre-Construction Safety Meeting Checklist.

The Contractor shall be responsible for implementing, administering and maintaining a Confined Space Entry Program in accordance with all regulatory requirements including Section 5166, 5157, and 5158, Title 8, California Code of Regulations. Prior to starting work, the Contractor shall prepare and submit its comprehensive, written Confined Space Entry Program to the Engineer. The Contractor shall follow LACSD Lockout/Blockout/Tagout Procedures with the cooperation of LACSD operational personnel responsible for the equipment. Other hazards at the construction work site that will be addressed include explosive environments, biological hazards, electrically energized equipment, rotating equipment, bulk chemical storage (both hazardous and non-hazardous), drowning and noise.

## Coordination with Regional Agencies and Organizations

The Montebello Forebay Groundwater Recharge Project is a joint project of LACSD, WRD, and LADPW to replenish the Montebello Forebay of the Central Basin with recycled water. The Montebello Forebay Groundwater Recharge Project began using recycled water over 40 years ago in the early 1960s. Up to 35% of the water recharged into the Montebello Forebay is recycled water from the Whittier Narrows, San Jose Creek and Pomona Water Reclamation Plants. The three agencies jointly hold Water Reclamation Requirements for the project (California RWQCB, Los Angeles Region Order No. 91-100, File No. 71-67) (Attachment 8, Reference 12-12). LACSD has two contracts with WRD for recharge, one each for water from Whittier Narrows WRP and San Jose Creek WRP. In the early 1960's LACSD also contracted with LACDPW for the construction of outfall pipelines from Whittier Narrows to enable the reclaimed water to be delivered for spreading. In general, LACSD supplies the recycled water, the Water Replenishment District purchases it, and the water is delivered to the Rio Hondo and San Gabriel River Spreading Grounds, which are owned and operated by the Los Angeles County Department of Public Works. Inasmuch as this project will enhance the quality of the recycled water being provided for replenishment, the WRD and LACDPW are considered project partners and beneficiaries. Also, regular meetings and updates on the project are provided to both the WRD and State and Federal regulatory agencies, including the Los Angeles RWQCB, DHS, and EPA.

## 13. Wilmington Drain Restoration Multiuse Project

### Detailed Project Description

#### Project Need

The Wilmington Drain Restoration Multiuse Project will address water quality and stream restoration through capture and treatment of storm water while restoring wetland habitat for recreation and wildlife within the disadvantaged communities of Harbor City and Wilmington in the City of LA.

#### Project Description

The City of LA envisions restoring Wilmington Drain via a multi-step approach including native re-vegetation, storm water containment, pretreatment, enhanced public access and educational signage. This stretch of the drain occupies an area of 20 acres between the City of Lomita and Lomita Blvd. to the North, and the City of LA, Kenneth Malloy Harbor Regional Park to the South. The drain is a Los Angeles County drainage easement conveying flow from a drainage area of about 14 square miles. Upstream from the proposed project site, the drain is concrete-lined. The portion of the drain that is targeted by this project consists of a soft-bottom channel that has been designated by United States Geological Survey as a blue-line stream.

A detailed project layout was developed in June 2006 and will be further revised upon additional participation by interested groups. Non-native landscaping will be removed and replaced with appropriate native species. Storm water flow control will be achieved using natural materials and well-planned landscaping features, avoiding the need for destructive clearing of the channel. A sediment and trash capture component will provide necessary pre-treatment of storm water flows before they reach the restored habitat areas. Decomposed granite trails with educational signage will provide learning and passive recreational opportunities.

The project will create a public park to provide recreational opportunities for the surrounding disadvantaged communities. The park will include multiple amenities, including a fenced off-leash dog area. Site furnishing will include tree-shaded benches, drinking fountains, quality concrete waste receptacles, and picnic tables shall offer visible seating and safe gathering spaces. The park will also allow for a utility access on the west bank. Other park features include a 12-foot wide access roads with compacted stabilized decomposed granite paving, fencing, access gates, pedestrian trails, signage, and fencing. **Figure 5-21** depicts the proposed project layout.

This project is part of a larger effort by the City of LA and other regional stakeholders to provide access to their communities of the limited natural resources available within their urban watersheds. Towards this effort the City of LA is in the process of developing a Revitalization Master Plan for the LA River. The City of LA is also in the process of restoring or planning the restoration of its urban lakes, including the one adjacent to Wilmington drain, Lake Machado.

This project, in coordination with planned work for the Lake Machado, will enhance the recreational uses of both waterbodies and will assist towards Total Maximum Daily Load (TMDL) compliance. The trash capture component of this project will significantly reduce the amount of trash deposited into Lake Machado, which was identified as impaired due to trash discharges based on the most recent 303(d) list. The Wilmington Drain accounts for 65% of the storm water runoff into Machado Lake. The proposed project adds to the protection of the Machado Lake by limiting the trash discharges. This will assist to

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### 13. Wilmington Drain Restoration Multiuse Project

comply with the trash TMDL requirements and improve the quality of water flow through the channel. Trash capture units, such as nets, will be installed to protect Wilmington Drain as well as Lake Machado.

Providing public access to the park will enhance the quality of life for the disadvantaged communities of Harbor City and Wilmington. Open space are generally limited in the urban areas of Los Angeles. Over 92% of wetlands and open space have disappeared in the past half century, which makes it critical to nurture and restore this drain to a condition that will support and enhance the natural habitat, at the same time removing trash and other pollutants. This project would contribute to reversing these two trends.

Wilmington Drain area is located in the path of migratory birds. It will provide a much needed resting and refueling spot for various species of migrating birds during their annual migrations to and from the Northern Latitudes.

### Project Map

Project locations and facilities are identified on Figure 5-21. It depicts the proposed park layout, the areas of stream restoration, and the location of the proposed trash capture devices. Both ends of the project area will be used as monitoring sites to observe changes in water quality. **Figure 5-22** is a vicinity map that also shows the drainage area of the Wilmington drain. It also shows the proximity of this project to the nearby disadvantaged communities.



Figure 5-21: Wilmington Drain Project Location and Facilities

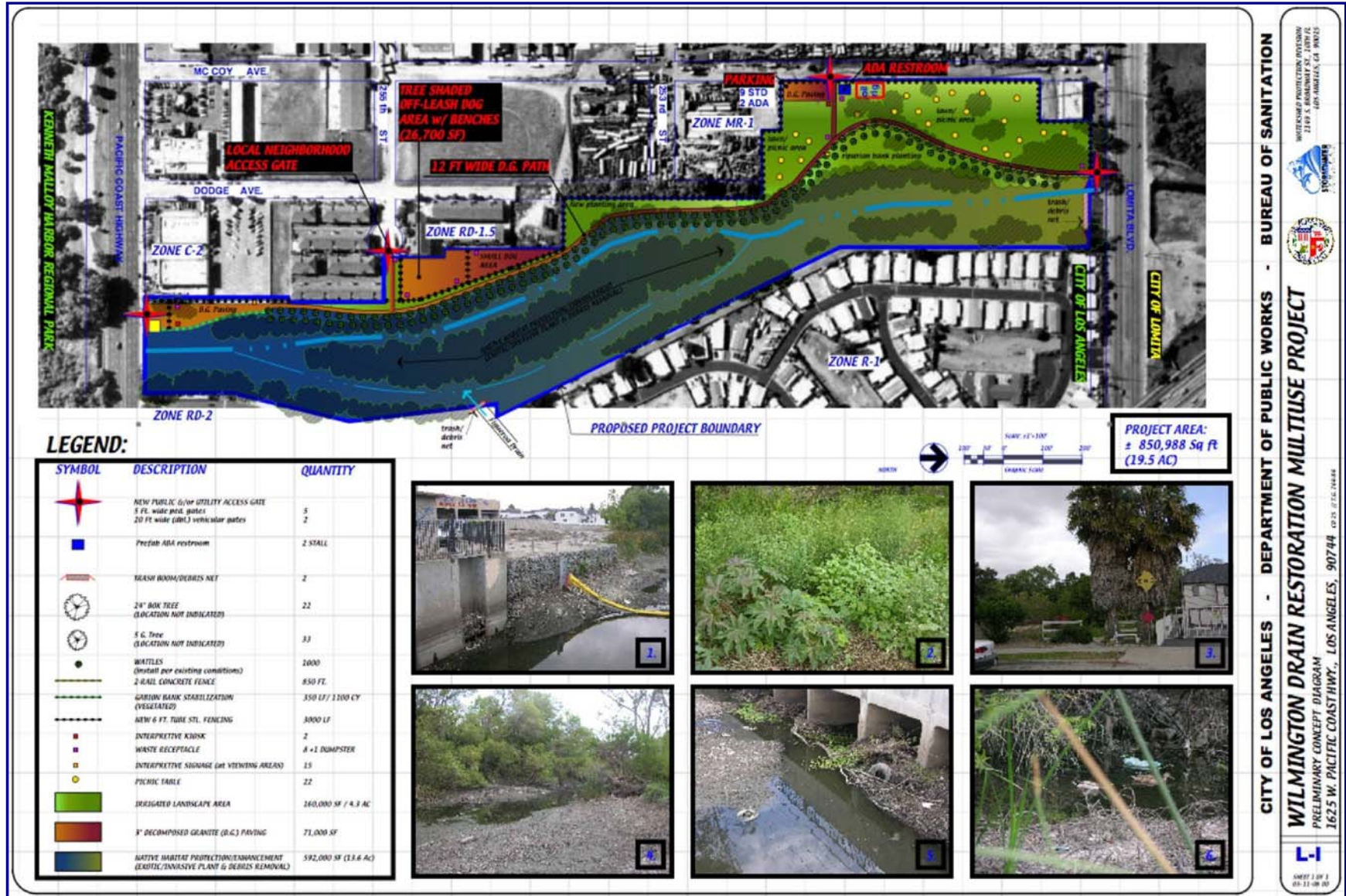
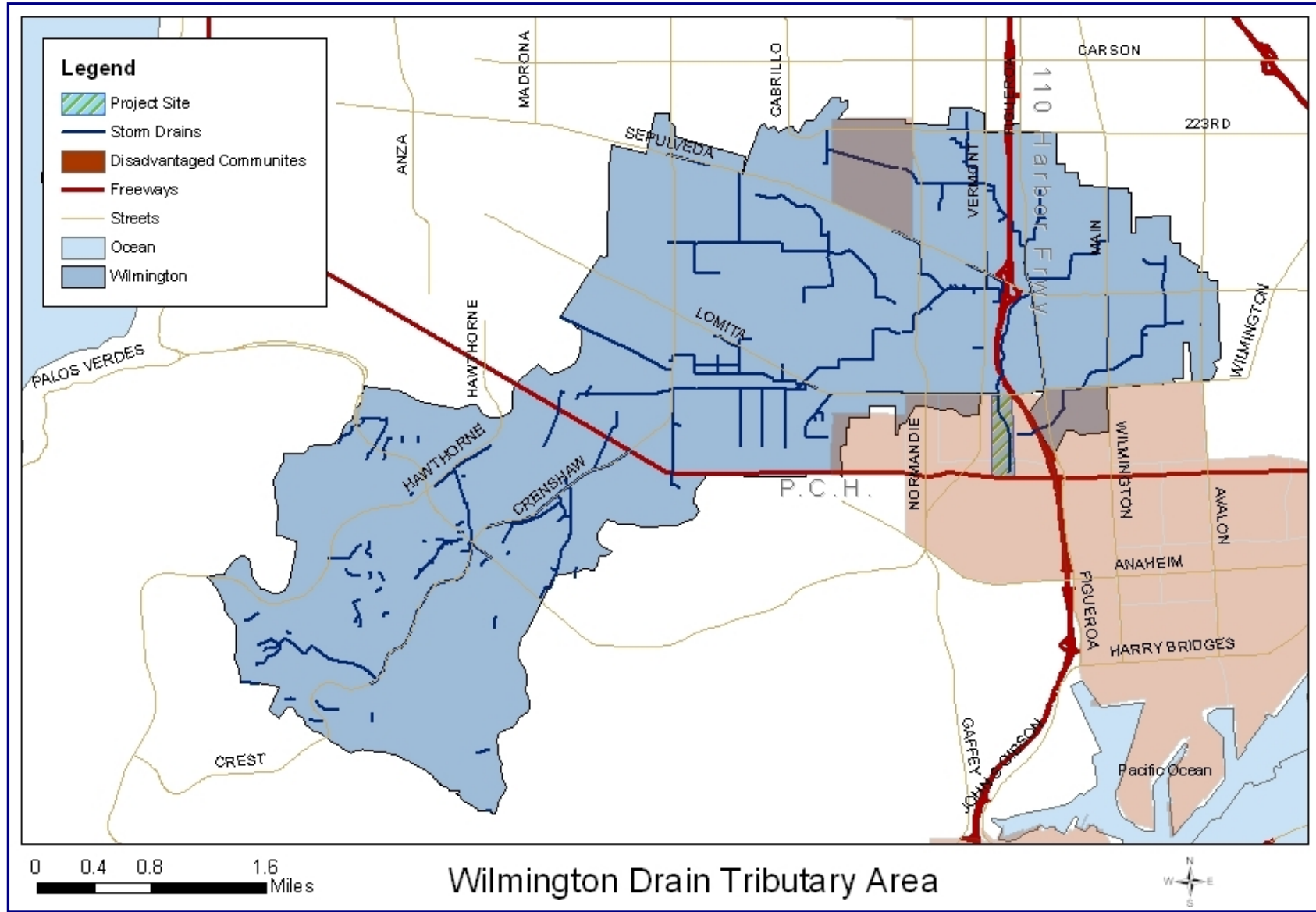




Figure 5-22: Wilmington Drain Project Location and Facilities



## Work Items through May 1, 2007

The following sections discuss work items that are either: 1) complete as of application submittal; or 2) will be completed by May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. If the submittal was completed prior to application submission, the submittal is included with the application. Otherwise, if the submittal will occur after application submission, the submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

This project will be administered by the LADPW. The staff and their duties will consist of clerical, managerial, engineering, design, construction administration, field and office work. The major tasks will include the following:

- Seek and coordinate City of LA and State funding for the project
- Coordinate the approval of the various stages of the project by the City of LA's Board of Public Works, and the City of LA Council
- Package construction contract proposal, advertise contract and solicit bids
- Evaluate bids, select contractor, and award bid
- Track overall project milestones, finance and budgets, and resource allocation
- Maintain project documentation
- Administer project quality control plan
- Prepare quarterly progress reports and deliverables to the State
- Oversee stakeholder participation through out project
- Coordinate maintenance training

### (b) Land Purchase / Easement

The proposed park is in a flood control channel and the adjacent easement is administered by LACFCD. The City of LA and LACFCD have cooperated in preparing the existing feasibility study and on the development of the project. Tentatively, it has been agreed that the park component of this project will be operated by the City of LA and the trash capture component will be operated by the LACFCD.

### (c) Planning / Design / Engineering / Environmental Documentation

#### *Planning*

The Wilmington Drain Restoration Multiuse Project Concept Report regarding this project was completed in June 2006 (Attachment 8, Reference 13-1). The report identified the project layout and sought input from stakeholders, such as the Los Angeles County, elected officials from the area, the Audubon Society, the LACDRP and Los Angeles County. A workshop will be held in late June 2006.

## 13. Wilmington Drain Restoration Multiuse Project

Planning Submittals	
Concept Report	June 2006
Public Workshop Attendance Sheet	June 2006

*Design / Engineering*

The final (100%) Design for the Wilmington Drain Restoration Multiuse Project will be completed in April 2007. The design is broken down into 10%, 50%, 90%, and 100% submittals. These submittals are as follows:

**The 10% Design will include:**

- Preliminary design of the two trash capture systems
- Surveys of the drain and its surrounding areas to determine staging of personnel and equipment
- Estimate flows and flow path that will be taken by first flush flows
- Preliminary determination of types of native and non-native flora
- Determination of the permits needed
- Survey of the non-native vegetation that needs to be removed
- Landscape architectural layout of green areas, contour of the drain channel, re-configuration and layout of gabions at the southern bend of the drain
- Conceptual design of access ways, walkways, parking lot, benches, rest areas, and rest room facilities

**The 50% Design will include:**

- Revisions based on comments received on the 10% design
- More detail plans and outdated layout of the proposed park and associated facilities
- Prepare survey drawings
- Right-of-way maps and documentations
- Update structural design and cost estimation for trash capturing system
- Updated cost estimate

**The 90% Design will include:**

- Review issues and comments received at 50% design completion
- Update cost estimation
- Obtain required permits
- Complete survey drawings
- Right-of-way maps and documentations
- Update structural design and cost estimation for trash capturing system
- Environmental requirements have been incorporated
- Complete design calculations
- Design specification

## 13. Wilmington Drain Restoration Multiuse Project

**The 100% Design (final) will include:**

- Drawing details and sections
- Complete and organized plans
- Plan sheets and details coordinated within and among design disciplines
- Consistent plans and specifications
- Complete, signed, and “As-Advertised” plans and specifications.

Design Submittals	
10% Design and Cost Estimate	Aug 2006
50% Design	Nov 2006
90% Design	Feb 2007
Final Construction Documents	Apr 2007

*Environmental Documentation*

An Initial Study Environmental Checklist Form (see Attachment 5-13) was prepared concurrently with this Proposal that indicates that this project will not have an environmental impact. This project is exempt from CEQA requirements per Exemption Class 1(4) of the City LA’s CEQA Guidelines, which provides that “installation of new equipment and /or industrial facilities involving negligible or no expansion of use is exempt from the requirements of CEQA if required for safety, health, the public convenience, or environmental control.”

Environmental Documentation Submittals	
Initial Study Environmental Checklist Form	June 2006
Notice of Exemption	April 2007

*Permit Acquisition*

Permitting will depend on the extent of the work that will be performed on the drain. It is expected that permits will be required from the CDFG, Los Angeles RWQCB, and the City of LA Department of Animal Control. The application for the permits will be initiated upon completion of the design.

Permitting Submittals	Purpose	Approval Date	Status
CDFG Permit	To ensure no wildlife impact	April 2007	Upon completion of 100% design
RWQCB Permit	Wilmington Drain is a Water of the State and is designated as Blue line by USGS		
City of LA Department of Animal Control	Permit for the dog park		

## 13. Wilmington Drain Restoration Multiuse Project

**(g) Other**

A PAEP will be prepared upon notification of grant award, which is expected in November 2006, and will be completed in February 2007. A LCP will be prepared by February 2007.

Other Submittals	
Project Assessment and Evaluation Plan	Feb 2007
Labor Compliance Plan	Feb 2007



## Work Items to Complete after May 1, 2007

The following sections discuss work items that will be completed after May 1, 2007. The work items are divided into each of the seven primary budget tasks but tasks without work items are omitted.

All work items will be documented by submittals to the State. These submittals are listed in boxes at the end of each task along with an estimated date of submittal completion. The submittal will occur upon completion of the work as indicated in the submittal tables.

### (a) Direct Project Administration Costs

This project will be administered by the LADPW. The staff and their duties will consist of clerical, managerial, engineering, design, construction administration, field and office work. The major tasks will include the following:

- Seek and coordinate City of LA and State funding for the project
- Coordinate the approval of the various stages of the project by the City of LA's Board of Public Works, and the City of LA Council
- Package construction contract proposal, advertise contract and solicit bids
- Evaluate bids, select contractor, and award bid
- Track overall project milestones, finance and budgets, and resource allocation
- Maintain project documentation
- Administer project quality control plan
- Prepare quarterly progress reports and deliverables to the State
- Oversee stakeholder participation through out project
- Coordinate maintenance training

#### Project Administration Submittals

Quarterly Progress Reports	Quarterly
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### (d) Construction / Implementation

Construction and rehabilitation of the Wilmington Drain will consist of the following major elements:

**Gabion Reconstruction** that includes removal of dilapidated existing rip-rap filled gabions depicted in Figure 5-21, Picture 1 and replacement with rounded stone filled baskets. Baskets are to be installed in a contoured sinuous form along the banks, to promote smooth flow minimizing eddy currents and their detrimental effects on fill material. Gabions protection will be battered, and sited to allow vegetation with seed and locally harvested willow wattles to take root.

**Addition of Site Amenities/Improvements** that will be accomplished by the addition/improvement of the following elements

- ADA accessible restroom, parking area and drinking fountain
- Fenced off-leash dog area with drinking fountain and dog watering area (regulatory signage to either require dogs to be on-leash and on-trails, or excluded in park outside off-leash dog area)

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13. Wilmington Drain Restoration Multiuse Project

- Site furnishings to include tree shaded benches, drinking/canine watering fountains, quality concrete waste receptacles, and picnic tables
- Re-grade the 12-ft wide utility access road (West bank) with compacted stabilized decomposed granite paving, fencing and access gates. Gates and access road layout shall facilitate park trash removal and drive through maintenance vehicles
- Trails: Graded 6-ft wide compacted stabilized decomposed granite paving. Design layout to provide safe circulation, provide wildlife viewing areas and to protect channel habitat.
- Signage: Kiosks, monument signage, and trail signage
- Fencing/Safety: Removal and disposal of existing chain link fencing and installation of new tubular steel fencing on the perimeter. Fence, trail and planting design layout will provide clear sight lines from perimeter circulation/roadways, and allow for ease of access for clean-up and debris removal
- Community access gate (Error! Reference source not found., Picture 3): Community input required on types of plants, benches, gates, new fencing and pedestrian access at existing RD1.5 housing access area.

**Vegetation** that will involve removing known exotic and invasive plants from the project area (Error! Reference source not found., Picture 2) and the neighboring properties where feasible. To select and plant native plants primarily from the riparian and coastal sage-scrub communities capable of naturalizing (especially in riparian areas) or reseeding from park into channel areas. Plantings shall include trees, shrubs, lawn, groundcover, and vines. Vines will be useful in preventing graffiti on common perimeter block walls and as forager for the fauna. It is expected that minimal irrigation runoff from bank plantings may be used to extend wet season habitat. All plantings shall be irrigated either temporarily in order to establish, or permanently as required to provide a green planted barrier for fire control and public use.

Secondary planting goal is to create a native plant and trail edge timber barrier between trails and channel that protects nesting and foraging habitat from dust, debris, canines, and human traffic (Figure 5-21, Picture 4). These plants will consist in part of stock propagated from one site cuttings and will stop windblown debris from floating into the channel, facilitate maintenance, and provide a degree of pollutant removal and water treatment benefits for surface flow into the channel.

The tertiary planting goal is to extend and improve the use of both the riparian habitat (Figure 5-21, Picture 6) and neighborhood/community park space through the installation of enhanced passive park space, a picnic area, neighborhood entry, and trailside plantings.

**Stormwater Quality Improvements** that will include:

- Trash netting system at North end of drain at Lomita Blvd
- Trash netting system at Figueroa Drain
- Park surface flow mitigation via grass filters, channel perimeter planting restricted area use, and formation of walking trails.
- Channel perimeter in-flow mitigation via catch basin filters and improved utility access for maintenance purposes.
- Install quality waste receptacles and provide bio-degradable waste bags at off-leash dog areas, trails and parking/picnic areas. Provide dumpster sited for ease of access at the utility entrance.
- Provide bi-lingual prominently displayed signage for collecting, sorting, and storing trash in separate recycle bins.

Construction Submittals	
Notice to Proceed	Dec 1, 2007
Construction Inspection Checklist	Dec 2008

### (e) Environmental Compliance / Mitigation/ Enhancement

Environmental compliance, mitigation and enhancements will involve detailed planning, staging, storing, transporting, sorting and disposal of materials removed from the park area during construction complying with all environmental standards. Maximum effort will be made to identify and recycle all recyclables. Construction will be carried out between the hours of 08:00 a.m. and 3:00 p.m. to comply with the Mayors ordinance to mitigate the effects of noise, light traffic and other environmentally detrimental factors on the neighborhoods. Mitigation measures for dust control and sediment control will be in effect during the duration of the entire project. Construction activity will take place during dry weather and a construction SWPPP will be prepared.

### (f) Construction Administration

Construction management and engineering services during construction activities will be performed by the City of LA. These efforts include:

- Identify and set up cost tracking mechanisms with related work orders.
- Complete Bid and Award Process, provide notice to proceed construction, provide neighborhood notification of construction project including its funding, duration, goals and objectives of the project
- Track the quality of the construction project by conducting periodic inspections
- Coordinate construction activities with all stakeholders by holding periodic meetings, reviewing construction progress and providing timely feedback.
- Identify lead inspector from the Bureau of Contract Administration, establish regular communications with the person
- Provide periodic updates to stakeholders through e-mail, mailings, and neighborhood meetings
- Provide information for the quarterly reporting to the State
- Complete project, follow up with reports, auditing spare parts and provide training for operations/maintenance personnel
- Close out of construction contract

### (g) Other

A MP and QAPP will be prepared prior to start of construction, which is expected in December 2007.

Other Submittals	
Monitoring Plan	Dec 2007
Quality Assurance Project Plan	Dec 2007

## Discussion of Standards and Merits

### *Standards*

Construction material that will be used in the project shall conform to the standards and applicable codes of the State. This is in addition to construction materials as stated in the Greenbook. All equipment furnished and used by the contractor shall comply with City of LA Building and Safety construction codes, City of LA Fire Codes, OSHA Title 8 codes for Industrial Safety. Standards that relate to specific knowledge, training, operations, and license to operate the equipment shall be specified in the contract documents. Finally, construction equipment shall comply with the latest Rules and Regulations of the SCAQMD.

### *Merits*

The project will be implemented in accordance with established professional standards. The leading construction material for the project will consist of concrete structures and mechanical equipment. These materials will be used consistent with established City of LA codes and established standards. The restoration of the creek and the establishment of the wetlands will be consistent with established restoration practices. Finally, established engineering practices will be used to determine the sizing and selection of materials for all new constructed facilities.

## Coordination with Regional Agencies and State

The Wilmington Drain Project is a regional project that will be coordinated between LADPW and LACDPW. Since the channel and the adjacent lots are owned or are easements that belong to the Los Angeles County, a formal agreement would be required between LADPW and LACDPW for the implementation of this project. Based on preliminary discussions, it is anticipated that the park component of this project will be operated by the City of LA and the trash capture systems will be maintained by LACDPW.

**Appendix 5-1: References for**  
**1. Central Basin Southeast Water Reliability Project**

**(Contents Included on CD)**



**Appendix 5-2: References for  
2. JWPCP Marshland Enhancement Project**

**(Contents Included on CD)**

**Appendix 5-3: References for**

**3. Large Landscape Water Conservation, Runoff Reduction  
and Educational Program**

**(Contents Included on CD)**

**Appendix 5-4: References for  
4. Las Virgenes Creek Restoration Project**

**(Contents Included on CD)**

**Appendix 5-5: References for**  
**5. Malibu Creek Watershed Water Conservation, Runoff**  
**Reduction, and Native Flow Restoration Project**

**(Contents Included on CD)**

**Appendix 5-6: References for  
6. Morris Dam Water Supply Enhancement Project**

**(Contents Included on CD)**



**Appendix 5-7: References for  
7. North Atwater Creek Restoration Project**

**(Contents Included on CD)**

**Appendix 5-8: References for  
8. Pacoima Wash Greenway Project: 8th Street Park**

**(Contents Included on CD)**

**Appendix 5-9: References for  
9. San Gabriel Valley Riparian Habitat Arundo Removal  
Project**

**(Contents Included on CD)**

**Appendix 5-10: References for  
10. Solstice Creek Southern Steelhead Habitat Restoration  
Project**

**(Contents Included on CD)**

**Appendix 5-11: References for  
11. South Los Angeles Wetlands Park Project**

**(Contents Included on CD)**



**Appendix 5-12: References for  
12. Whittier Narrows Water Reclamation Plant UV  
Disinfection Facilities Project**

**(Contents Included on CD)**

**Appendix 5-13: References for  
13. Wilmington Drain Restoration Multiuse Project**

**(Contents Included on CD)**

**Appendix 5-14:**  
**Proposal Acronyms**

af	acre-foot
afy	acre-foot per year
ASBS	Area of Special Biological Significance
BMP	Best Management Practices
BOD	biological oxygen demand
CAC	Citizen's Advisory Committee
CALFED	California Water Policy Council and Federal Ecosystem Directorate
CalTrans	California Department of Transportation
Calabasas	City of Calabasas
CANNDU	Community and Neighbors for the Ninth District Neighborhood Council
CBMWD	Central Basin Municipal Water District
CCT	chlorine contact tanks
CD9	Council District 9 Corridors South of the Santa Monica Freeway Recovery Redevelopment Project
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
City of LA	City of Los Angeles
CSSA	Collection Systems Settlement Agreement
CUWCC	California Urban Water Conservation Council
cy	cubic yards
DHS	California Department of Health Services
DSOD	DWR Division of Safety of Dames
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EA	Environmental Assessment
ea	each
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ET	evapotranspiration
HECW	high efficiency clothes washer
HOA	home-owners association
IRP	Integrated Resources Plan
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
JOS	Joint Outfall System
JWPCP	Joint Water Pollution Control Plant

LACC	Los Angeles Conservation Corps
LACDPR	Los Angeles County Department of Parks and Recreation
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LACSD	Sanitation Districts of Los Angeles County
LADRP	City of Los Angeles Department of Recreation and Parks
LADPW	City of Los Angeles Department of Public Works
LADWP	City of Los Angeles Department of Water and Power
LA River	Los Angeles River
LASGRWC	Los Angeles & San Gabriel Rivers Watershed Council
LAUSD	Los Angeles Unified School District
LCP	Labor Compliance Plan
Lf	length of feet
L.S.	lump sum
LVMWD	Las Virgenes Municipal Water District
Metro	Los Angeles County Metropolitan Transportation Authority
MFR	multi-family residence
mg/L	milligrams per liter
mgd	million gallons per day
MND	Mitigated Negative Declaration
MP	Monitoring Plan
MRCA	Mountains Recreation and Conservation Authority
MRT	Mountain Restoration Trust
MWD	Metropolitan Water District of Southern California
NA	Not Available
NDMA	N-Nitrosodimethylamine
NDN	nitrification/ denitrification
NEPA	National Environmental Policy Act
ng/L	nanograms per liter
NPDES	National Pollutant Discharge Elimination System
NWRI	National Water Research Institute
O&M	operation and maintenance
OSHA	Occupational Safety and Health Administration
PEA	preliminary endangerment assessment
PAEP	Project Assessment and Evaluation Plan
PCE/TCE	Perchloroethylene/ Trichloroethylene
Proposal	Greater Los Angeles County Region Proposal
QAPP	Quality Assurance Project Plan



RCD	Resource Conservation District
Region	Greater Los Angeles County Region
RFI	request for information
RWQCB	Regional Water Quality Control Board
SAA	Streambed/Lake Alteration Agreement
SCAQMD	South Coast Air Quality Management District
sf	square feet
SGVWRP	San Gabriel Valley Water Recycling Project
SSA	supplemental site assessment
State	State of California
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWRP	Southeast Water Reliability Project
TMDL	Total Maximum Daily Load
ULFT	ultra low flush toilets
USACE	United States Army Corps of Engineers
USBR	United State Bureau of Reclamation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USNPS	United States National Park Service
UV	ultraviolet
UVT	ultraviolet transmittance
VOC	volatile organic compound
WBIC	weather based irrigation controller
West Basin	West Basin Municipal Water District
WRA	WRA Environmental Consultants, Inc.
WRD	Water Replenishment District of Southern California
WRP	Water Reclamation Plant